				Failu	re Mode and Effec	cts Analysis (FMEA)						
System: electric	power sys	tem		Component: PVGC					Componen	it No.:		
Subsystem: AC	oower sup	ply syste	m 1	Component function: supply	AC power		ATA No.: 24	-20	Drawing N	o. and revision	:	
FMEA No.	Failure	Flight	Failure	Identification and corrective	Requirements	Effect caused by	Single	Failure	Exposure	Occurrence	Hazard	Remark
	modes	phase	effect	actions	for dispatch	cascaded/concurrent	component	rate of	time (H)	probability	level	
	and		a) Local	a) Provide indication to the	with failure	hazardous failures	failure rate	failure		of failure		
	causes		effect	flight crew;	a) Yes, the		(1E-6/H)	mode		mode		
			b)	b) Other failures with same	aircraft can be			(1E-6/H)				
			Higher-level	indication;	dispatched							
			effect	c) Failure identification,	b) If "yes",							
			c) Final	isolation and corrective	what							
			effect (for	actions made by flight	restrictions							
			aircraft)	crew;	apply							
				d) Effect caused by								
				possible improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
24-20-01-01.01	PVGC	All	a) PVGC	a) CAS: L GEN FAULT;	a) Yes;	None.	13.48	13.48	12	1.618E-4	IV	
	cannot		cannot	b) Malfunctions of LGCU,	b) RVFG and							
	supply		supply AC	LOPU, LGC, etc.	PSF power							

 AC	power;	c) Try to reset PVGC via	supply is in				
power.	b) Electric	PVGC control switch, if	normal				
Failure	power	warning information still	condition, and				
cause:	system	exists, disconnect the	electric power				
PVGC	PSF	PVGC;	system				
body	replaces	d) TBD;	interconnection				
failure.	faulty	e) Disconnect PVGC and	and power				
	PVGC to	aircraft electric power	supply are in				
	supply	network;	normal				
	power;	f) Replace the PVGC.	condition				
	c) Aircraft						
	power						
	supply						
	redundancy						
	is						
	decreased.						

				Failure Mode	and Effects Analy	sis (FMEA)						
System:	electric power	system		Component: APBE					Componen	t No.:		
Subsyste	em: AC power	supply sys	tem 1	Component function: PVGC control ar	nd protection		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes and	phase	a) Local	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	causes		effect	crew;	with failure	cascaded/	failure rate	failure		probability		
			b)	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			Higher-level	indication;	aircraft can be	hazardous		(1E-6/H)		mode		
			effect	c) Failure identification, isolation and	dispatched	failures						
			c) Final	corrective actions made by flight	b) If "yes",							
			effect (for	crew;	what							
			aircraft)	d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
24-20-	Faulty	All	a) PVGC	a) CAS: L GEN FAULT;	a) Yes;	None.	22.77	22.77	4	9.108E-5	IV	
02-01.	control and		cannot	b) Malfunctions of PVGC, LOPU,	b) RVFG and							
01	protection		supply AC	LGC, etc.	PSF power							
	of APBE		power;	c) Try to reset PVGC via PVGC	supply is in							
	for PVGC.		b) Electric	control switch, if warning information	normal							
	Failure		power	still exists, disconnect the PVGC;	condition, and							
	cause:		system PSF	d) TBD;	electric power							

APBE	replaces	e) Disconnect PVGC and aircraft	system				
circuit	faulty PVGC	electric power network, and cut off	interconnectio				
failure.	to supply	APBE power input;	n and power				
	power;	f) Replace APBE.	supply are in				
	c) Aircraft		normal				
	power supply		condition				
	redundancy						
	is						
	decreased.						

				Failure Mode	and Effects Analy	/sis (FMEA)						
System: el	ectric power	system		Component: MEQC					Componen	t No.:		
Subsysten	n: AC power	supply sys	stem 1	Component function: PVGC over-	voltage protection		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H)		mode		
			(for aircraft)	indication;	dispatched	failures						
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
24-20-03	MEQC	All	a) Open circuit	a) CAS: L GEN FAULT;	a) Yes;	None.	2.66	2.66	5	1.33E-5	IV	
-01.01	malfuncti		occurs to PVGC	b) Malfunctions of PVGC, APBE,	b) RVFG and							
	on.		excitation circuit	LGC, etc.	PSF power							
	Failure		due to MEQC	c) Try to reset PVGC via PVGC	supply is in							
	cause:		failure, and	control switch, if warning	normal							

MEQC	PVGC cannot	information still exists,	condition, and			
circuit	supply AC	disconnect the PVGC;	electric power			
failure.	power;	d) TBD;	system			
	b) Electric power	e) Disconnect PVGC and aircraft	interconnectio			
	system PSF	electric power network, and cut	n and power			
	replaces faulty	off MEQC power input;	supply are in			
	PVGC to supply	f) Replace MEQC.	normal			
	power;		condition			
	c) Aircraft power					
	supply					
	redundancy is					
	decreased.					

				Failure Mode	and Effects Analy	sis (FMEA)						
System: el	ectric power s	ystem		Component: EQW					Componen	t No.:		
Subsystem	n: AC power su	upply s	ystem 1	Component function: PVGC and L	. AC Bus on/off co	ntrol	ATA No.: 24-	-20	Drawing No	o. and revision		
FMEA	Failure	Flig	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes and	ht	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	causes	pha	b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
		se	effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
24-20-04	EQW is	All	a) PVGC and L	a) Electric power system OMS	a) Yes;	None.	4.62	2.31	12	2.772E-5	No	
-01.01	closed due		AC Bus remain	information;	b) None;						effect	
	to failure.		power-on	b) None;							on	
	Failure		condition;	c) None;							safety	
	cause:		b) Unable to	d) TBD;								

				Failure Mode	and Effects Analy	sis (FMEA)						
System: el	lectric power s	ystem		Component: EQW					Componen	t No.:		
Subsystem	n: AC power su	ipply sy	ystem 1	Component function: PVGC and L	AC Bus on/off co	ntrol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flig	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes and	ht	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	causes	pha	b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
		se	effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	EQW		isolate PVGC and	e) None;								
	mechanical		aircraft electric	f) Replace EQW;								
	failure.		power network via									
			disconnecting									
			EQW when									
			required;									
			c) No effect.									

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: el	ectric power s	ystem		Component: EQW					Componen	nt No.:		
Subsystem	n: AC power su	upply sy	ystem 1	Component function: PVGC and L	. AC Bus on/off co	ntrol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flig	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes and	ht	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	causes	pha	b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
		se	effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
24-20-04	EQW is	All	a) PVGC and L	a) CAS: L GEN FAULT;	a) Yes;	None.	4.62	2.31	2	4.62E-6	IV	
-01.02	disconnect		AC Bus are	b) Malfunctions of PVGC, APBE,	b) RVFG and							
	due to		disconnected, and	MEQC, etc.	PSF power							
	failure.		PVGC cannot	c) Try to reset PVGC via PVGC	supply is in							
	Failure		supply power to	control switch, if warning	normal							
	cause:		the external users;	information still exists,	condition, and							
	EQW		b) Electric power	disconnect the PVGC;	electric power							

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: e	lectric power s	ystem		Component: EQW					Componen	t No.:		
Subsysten	n: AC power su	ipply sy	ystem 1	Component function: PVGC and L	AC Bus on/off co	ntrol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flig	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes and	ht	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	causes	pha	b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
		se	effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	mechanical		system PSF	d) TBD;	system							
	failure.		replaces faulty	e) Disconnect PVGC and aircraft	interconnectio							
			PVGC to supply	electric power network;	n and power							
			power;	f) Replace EQW;	supply are in							
			c) Aircraft power		normal							
			supply		condition							
			redundancy is									

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: e	lectric power s	ystem		Component: EQW	-				Componen	t No.:		
Subsyster	m: AC power รเ	upply sy	ystem 1	Component function: PVGC and L	. AC Bus on/off co	ntrol	ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flig	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes and	ht	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	causes	pha	b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
		se	effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
			decreased.									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PVGC control switch					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 1	Component function: PVGC and L A	AC Bus on/off cont	rol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-05	PVGC	All	a) Unable to	a) Electric power system OMS	a) Yes;	None.	0.1208	0.0604	15	9.06E-7	No	
-01.01	control		manually	information;	b) None;						effect	
	switch is		disconnect	b) None;							on	
	closed		PVGC;	c) None;							safety	
	due to		b) No effect.	d) TBD;								
	failure.		c) No effect.	e) None;								

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PVGC control switch					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 1	Component function: PVGC and L A	AC Bus on/off cont	rol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	Failure			f) Replace PVGC control switch								
	cause:											
	switch											
	mechanic											
	al failure.											
24-20-05	PVGC	All	a) PVGC and L	a) CAS: L GEN FAULT;	a) Yes;	None.	0.1208	0.0604	5	3.02E-7	IV	
-01.02	control		AC Bus are	b) Malfunctions of PVGC, APBE,	b) RVFG and							

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PVGC control switch					Componen	t No.:		
Subsysten	n: AC power	supply sys	tem 1	Component function: PVGC and L A	AC Bus on/off cont	rol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
	c) Failure identification, isolation			c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	switch is		disconnected,	MEQC, etc.	PSF power							
	disconne		and PVGC	c) Try to reset PVGC via PVGC	supply is in							
	cted due		cannot supply	control switch, if warning	normal							
	to failure.		power to the	information still exists, disconnect	condition, and							
	Failure		external users;	the PVGC;	electric power							
	cause:		b) Electric power	d) TBD;	system							
	switch		system PSF	e) Disconnect PVGC and aircraft	interconnectio							
	mechanic		replaces faulty	electric power network;	n and power							

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	electric powe	r system		Component: PVGC control switch					Componen	t No.:		
Subsyster	m: AC power	supply sys	stem 1	Component function: PVGC and L A	AC Bus on/off cont	rol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	al failure.		PVGC to supply	f) Replace PVGC control switch	supply are in							
			power;		normal							
			c) Aircraft power		condition							
			supply									
	redundancy is											
			decreased.									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PVGC manual tripping	switch		_		Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 1	Component function: PVGC and left	engine mechanic	al tripping	ATA No.: 24	-20	Drawing No	o. and revision	:	
				control								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-06	PVGC	All	a) Unable to	a) None;	a) Yes;	None.	0.1208	0.0604	70000	4.228E-3	No	Hidden
-01.01	manual		manually	b) None;	b) None;						effect	failure
	tripping disconnect the		c) None;							on		
	switch is mechanical			d) TBD;							safety	
	opened		connectors	e) None;								

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: e	electric power	system		Component: PVGC manual tripping	switch				Componen	it No.:		
Subsyster	m: AC power	supply sy	vstem 1	Component function: PVGC and left	t engine mechanic	al tripping	ATA No.: 24	-20	Drawing No	o. and revisior	:	
				control				1				
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	due to		between PVGC	f) Replace PVGC tripping switch								
	failure.		and left engine;									
	Failure		b) No effect;									
	cause:		automatic tripping									
	switch mechanism is											
	mechanic provided between											
	al failure.		PVGC and left									

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	lectric power	system		Component: PVGC manual tripping	switch				Componen	t No.:		
Subsysten	n: AC power	supply sy	/stem 1	Component function: PVGC and left	engine mechanic	al tripping	ATA No.: 24-	-20	Drawing No	o. and revision	:	
				control								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			engine;									
c) No effect.			c) No effect.									
24-20-06 PVGC All a) The mechanical a) CAS: L GEN I			a) CAS: L GEN FAULT;	a) Yes;	None.	0.1208	0.0604	5	3.02E-7	IV		
-01.02	manual	connectors b) Malfunctions of PVGC, APBE,			b) RVFG and							
	tripping		between PVGC	MEQC, etc.	PSF power							
	switch is		and left engine are	c) Try to reset PVGC via PVGC	supply is in							

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PVGC manual tripping	switch				Componen	t No.:		
Subsyster	m: AC power	supply s	ystem 1	Component function: PVGC and left	engine mechanic	al tripping	ATA No.: 24	-20	Drawing N	o. and revision	:	
				control								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	closed		disconnected, and	control switch, if warning	normal							
	due to		PVGC is faulty	information still exists, disconnect	condition, and							
	failure.		due to loss of	the PVGC;	electric power							
	Failure		mechanical drive;	d) TBD;	system							
cause: b) Electric power e) Disconnect PVGC			e) Disconnect PVGC and aircraft	interconnectio								
	switch system PSF elect			electric power network;	n and power							
	mechanic		replaces faulty	f) Replace PVGC manual tripping	supply are in							

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PVGC manual tripping	switch				Componen	t No.:		
Subsyster	n: AC power	supply sy	ystem 1	Component function: PVGC and left	engine mechanic	al tripping	ATA No.: 24-	-20	Drawing No	o. and revision	:	
				control								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	al failure.		PVGC to supply	switch	normal							
			power;		condition							
	c) Aircraft power											
	supply											
	redundancy is											
			decreased.									

				Failure Mode and	d Effects Analys	s (FMEA)						
System: el	ectric power	system		Component: PBED					Componen	t No.:		
Subsystem	n: AC power	supply sy	stem 1	Component function: supply AC power			ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirement	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	s for	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	dispatch with	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	failure	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	a) Yes, the	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	aircraft can	failures)				
	actions;			be								
				e) Fault isolation—maintenance	dispatched							
				personnel;	b) If "yes",							
				f) Corrective actions—maintenance	what							
				personnel;	restrictions							
					apply							
24-20-07	PBED	All	a) PBED	a) CAS: R GEN FAULT;	a) Yes;	None.	13.48	13.48	12	1.618E-4	IV	
-01.01	cannot		cannot supply	b) Malfunctions of GRFS, PECU, RBD,	b) PVGC							
	supply		AC power.	etc.	and PSF							
	AC		b) Electric	c) Try to reset PBED via PBED control	power supply							
	power.		power system	switch, if warning information still exists,	is in normal							
	Failure		PSF replaces	disconnect the PBED;	condition,							
	cause:		faulty PBED to	d) TBD;	and electric							
	PBED		supply power;	e) Disconnect PBED and aircraft	power							
	body		c) Aircraft	electric power network;	system							

	failure.	power supply	f) Replace PBED.	interconnecti			
		redundancy is		on and			
		decreased.		power supply			
				are in normal			
				condition			

				Failure Mode and	d Effects Analysi	s (FMEA)						
System:	electric power	system		Component: GRFS					Componen	it No.:		
Subsyste	em: AC power	supply sy	ystem 1	Component function: PBED control and p	rotection		ATA No.: 2	4-20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirement	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes and	phase	a) Local effect	a) Provide indication to the flight crew;	s for	caused by	compone	rate of	time (H)	е	level	
	causes		b) Higher-level	b) Other failures with same indication;	dispatch with	cascaded/	nt failure	failure		probability		
			effect	c) Failure identification, isolation and	failure	concurrent	rate	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	a) Yes, the	hazardous	(1E-6/H)	(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	aircraft can	failures)				
				actions;	be							
	e			e) Fault isolation—maintenance	dispatched							
				personnel;	b) If "yes",							
				f) Corrective actions—maintenance	what							
				personnel;	restrictions							
					apply							
24-20-	Faulty	All	a) PBED	a) CAS: R GEN FAULT;	a) Yes;	None.	22.77	22.77	4	9.108E-5	IV	
08-01.	control and		cannot supply	b) Malfunctions of PBED, PECU, RBD,	b) PVGC							
01	protection		AC power.	etc.	and PSF							
	of GRFS		b) Electric	c) Try to reset PBED via PBED control	power supply							
	for PBED.		power system	switch, if warning information still exists,	is in normal							
	Failure		PSF replaces	disconnect the PBED;	condition,							
	cause:		faulty PBED to	d) TBD;	and electric							
	GRFS		supply power;	e) Disconnect PBED and aircraft	power							
	circuit		c) Aircraft	electric power network, and cut off	system							

	failure.	power supply	GRFS power input;	interconnecti			
		redundancy is	f) Replace GRFS.	on and			
		decreased.		power supply			
				are in normal			
				condition			

				Failure Mode a	nd Effects Analy	rsis (FMEA)						
System: el	ectric power	system		Component: PECU					Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 1	Component function: PBED over-vo	Itage protection		ATA No.: 24-	20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H		mode		
			aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-09	PECU	All	a) Open circuit	a) CAS: R GEN FAULT;	a) Yes;	None.	2.66	2.66	5	1.33E-5	IV	
-01.01	malfuncti		occurs to PBED	b) Malfunctions of PBED, GRFS,	b) PVGC							
	on.		excitation circuit	RBD, etc.	and PSF							
	Failure		due to PECU	c) Try to reset PBED via PBED	power supply							
	cause:		failure, and PBED	control switch, if warning	is in normal							
	PECU		cannot supply AC	information still exists, disconnect	condition,							

circuit	power;	the PBED;	and electric				
failure.	b) Electric power	d) TBD;	power				
	system PSF	e) Disconnect PBED and aircraft	system				
	replaces faulty	electric power network, and cut off	interconnecti				
	PBED to supply	PECU power input;	on and				
	power;	f) Replace PECU.	power supply				
	c) Aircraft power		are in normal				
	supply		condition				
	redundancy is						
	decreased.						

				Failure Mode a	nd Effects Analy	sis (FMEA)						
System: el	ectric power	system		Component: RBD					Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 1	Component function: PBED and R A	AC Bus on/off co	ntrol	ATA No.: 24-	-20	Drawing N	o. and revision		
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H		mode		
			aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-10	RBD is	All	a) PBED and R	a) Electric power system OMS	a) Yes;	None.	4.62	2.31	12	2.772E-5	No	
-01.01	closed		AC Bus remain	information;	b) None;						effect	
	due to		power-on	b) None;							on	
	failure.		condition;	c) None;							safety	
	Failure		b) Unable to	d) TBD;								
	cause:		isolate PBED and	e) None;								

				Failure Mode a	nd Effects Analy	sis (FMEA)						
System: el	ectric power	system		Component: RBD					Componen	t No.:		
Subsystem	: AC power	supply sy	ystem 1	Component function: PBED and R A	AC Bus on/off co	ntrol	ATA No.: 24-	20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H		mode		
			aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by dispatched								
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	RBD		aircraft electric	f) Replace RBD;								
	mechanic		power network via									
	al failure.		disconnecting									
			RBD when									
			required;									
			c) No effect.									
24-20-10	EQW is	All	a) PBED and R	a) CAS: R GEN FAULT;	a) Yes;	None.	4.62	2.31	2	4.62E-6	IV	

				Failure Mode a	nd Effects Analy	vsis (FMEA)						
System: e	lectric power	system		Component: RBD					Componen	t No.:		
Subsysten	n: AC power	supply sy	stem 1	Component function: PBED and R A	AC Bus on/off co	ntrol	ATA No.: 24-	-20	Drawing No	o. and revision	:	ļ
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H		mode		
			aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
-01.02	disconne		AC Bus are	b) Malfunctions of PBED, GRFS,	b) PVGC							
	ct due to		disconnected, and	PECU, etc.	and PSF							
	failure.		PBED cannot	c) Try to reset PBED via PBED	power supply							
	Failure		supply power to	control switch, if warning	is in normal							
	cause:		the external users;	information still exists, disconnect	condition,							
	RBD		b) Electric power	the PBED;	and electric							
	mechanic		system PSF	d) TBD;	power							
	al failure.		replaces faulty	e) Disconnect PBED and aircraft	system							

				Failure Mode a	nd Effects Analy	rsis (FMEA)						
System: e	lectric power	system		Component: RBD					Componen	it No.:		
Subsyster	n: AC power	supply sy	ystem 1	Component function: PBED and R A	AC Bus on/off co	ntrol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H		mode		
			aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			PBED to supply	electric power network;	interconnecti							
			power;	f) Replace RBD;	on and							
			c) Aircraft power		power supply							
			supply		are in normal							
			redundancy is		condition							
			decreased.									

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PVGC control switch			_		Componen	t No.:		
Subsystem	: AC power	supply sy	ystem 1	Component function: PVGC and L A	AC Bus on/off cont	rol	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-11	PBED	All	a) Unable to	a) Electric power system OMS	a) Yes;	None.	0.1208	0.0604	15	9.06E-7	No	
-01.01	control		manually	information;	b) None;						effect	
	switch is		disconnect PBED;	b) None;							on	
	closed		b) No effect.	c) None;							safety	
	due to		c) No effect.	d) TBD;								
	failure.			e) None;								

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: el	ectric power	system		Component: PVGC control switch					Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 1	Component function: PVGC and L A	AC Bus on/off cont	rol	ATA No.: 24-	-20	Drawing No	o. and revision		
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by what								
				flight crew; restrictions								
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	Failure			f) Replace PBED control switch.								
	cause:											
	switch											
	mechanic											
	al failure.											
24-20-11	PBED	All	a) PBED and R	a) CAS: R GEN FAULT;	a) Yes;	None.	0.1208	0.0604	5	3.02E-7	IV	
-01.02	control		AC Bus are	b) Malfunctions of PBED, GRFS,	b) PVGC and							

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PVGC control switch					Componen	t No.:		
Subsysten	n: AC power	supply sy	ystem 1	Component function: PVGC and L A	AC Bus on/off cont	rol	ATA No.: 24-	-20	Drawing No	o. and revision		
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	switch is		disconnected, and	PECU, etc.	PSF power							
	disconne		PBED cannot	c) Try to reset PBED via PBED	supply is in							
	cted due		supply power to	control switch, if warning	normal							
	to failure.		the external users;	information still exists, disconnect	condition, and							
	Failure		b) Electric power	the PBED;	electric power							
	cause:		system PSF	d) TBD;	system							
	switch		replaces faulty	e) Disconnect PBED and aircraft								
	mechanic		PBED to supply	electric power network;	n and power							

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PVGC control switch					Componen	t No.:		
Subsyster	n: AC power	supply sy	ystem 1	Component function: PVGC and L A	AC Bus on/off cont	rol	ATA No.: 24	-20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	al failure.		power;	f) Replace PBED control switch.	supply are in							
			c) Aircraft power		normal							
			supply		condition							
			redundancy is									
			decreased.									

				Failure Mod	de and Effects Ana	alysis (FMEA)						
System: el	ectric power	system		Component: PBED manual tripping	switch				Componen	nt No.:		
Subsysten	n: AC power	supply sy	ystem 1	Component function: PBED and left	engine mechanic	al tripping	ATA No.: 24-	-20	Drawing No	o. and revision	:	
		1		control							T	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation b) If "yes",								
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-12	PBED	All	a) Unable to	a) None;	a) Yes;	None.	0.1208	0.0604	70000	4.228E-3	No	Hidden
-01.01	manual		manually	b) None;	b) None;						effect	failure
	tripping		disconnect the	c) None;							on	
	switch is		mechanical	d) TBD;							safety	
	opened		connectors	e) None;								

				Failure Mod	le and Effects Ana	alysis (FMEA)						
System: e	lectric power	system		Component: PBED manual tripping	switch				Componen	t No.:		
Subsyster	m: AC power	supply sy	stem 1	Component function: PBED and left	engine mechanica	al tripping	ATA No.: 24-	-20	Drawing No	o. and revision	:	
				control						,		
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	due to		between	f) Replace PBED tripping switch								
	failure.		PBED and									
	Failure		right engine;									
	cause:		b) No effect;									
	switch		automatic									
	mechanic		tripping									
	al failure.		mechanism is									

				Failure Mod	de and Effects Ana	alysis (FMEA)						
System: el	ectric power	system		Component: PBED manual tripping	switch				Componen	t No.:		
Subsystem	n: AC power	supply sy	stem 1	Component function: PBED and left	engine mechanic	al tripping	ATA No.: 24-	-20	Drawing No	o. and revision	:	
	,			control	<u>, </u>							
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			provided									
	between											
	PBED and											
			right engine;									
			c) No effect.									
24-20-12	PBED	All	a) The	CAS: R GEN FAULT;	a) Yes;	None.	0.1208	0.0604	5	3.02E-7	IV	

				Failure Mod	de and Effects Ana	alysis (FMEA)						
System: e	lectric power	system		Component: PBED manual tripping	switch				Componen	nt No.:		
Subsyster	n: AC power	supply sy	ystem 1	Component function: PBED and left	engine mechanic	al tripping	ATA No.: 24	-20	Drawing N	o. and revision	1:	
				control								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
-01.02	manual		mechanical	b) Malfunctions of PBED, GRFS,	b) PVGC and							
	tripping		connectors	PECU, etc.	PSF power							
	switch is		between	c) Try to reset PBED via PBED	supply is in							
	closed		PBED and	control switch, if warning	normal							
	due to		right engine	information still exists, disconnect	condition, and							
	failure.		are	the PBED;	electric power							
	Failure		disconnected,	d) TBD;	system							

				Failure Mod	de and Effects Ana	alysis (FMEA)						
System: e	lectric power	system		Component: PBED manual tripping	switch				Componen	t No.:		
Subsyster	n: AC power	supply sy	stem 1	Component function: PBED and left	engine mechanic	al tripping	ATA No.: 24-	-20	Drawing N	o. and revision	1:	
				control								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	cause:		and PBED is	e) Disconnect PBED and aircraft	interconnectio							
	switch		faulty due to	electric power network;	n and power							
	mechanic		loss of	f) Replace PBED manual tripping	supply are in							
	al failure.		mechanical	switch	normal							
			drive;		condition							
			b) Electric									
			power system									

				Failure Mod	de and Effects Ana	alysis (FMEA)						
System: e	lectric power	system		Component: PBED manual tripping	switch				Componen	t No.:		
Subsyster	m: AC power	supply sy	stem 1	Component function: PBED and left	engine mechanic	al tripping	ATA No.: 24-	-20	Drawing No	o. and revision	:	
				control								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by								
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			PSF replaces									
			faulty PVGC to									
			supply power;									
			c) Aircraft									
			power supply									
			redundancy is									
			decreased.									

				Failure Mod	le and Effects A	nalysis (FMEA)					
System: el	ectric power	system		Component: PSF					Componer	nt No.:		
Subsystem	n: BQT start	and powe	er generation	Component function: supply AC po	ower and APU s	tarting torque	ATA No.: 24	-20	Drawing N	o. and revision:		
system												
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrence	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	probability of	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		failure mode		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode				
			c) Final effect	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H				
			(for aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
24-20-13	PSF	All	a) PSF cannot	a) CAS: APU GEN FAULT;	a) Yes;	None.	43.5	33.3	2	6.66E-5	IV	
-01.01	power		supply AC	b) Malfunctions of SQEP, AGC,	b) PVGC							
	supply		power.	etc.	and PBED is							
	malfuncti		b) PSF cannot	c) Try to reset PSF via PSF	in normal							

				Failure Mod	le and Effects A	nalysis (FMEA)					
System: e	lectric power	system		Component: PSF					Componen	nt No.:		
Subsyster	n: BQT start	and powe	er generation	Component function: supply AC po	ower and APU s	tarting torque	ATA No.: 24	-20	Drawing N	o. and revision:		
system		T	1					T		1	T	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrence	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	probability of	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		failure mode		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode				
			c) Final effect	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H				
			(for aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	on.		replace faulty	control switch, if warning	condition,							
	Failure VFG to supply			information still exists,	and electric							
	cause: power;			disconnect the PSF;	power							
	PSF		c) Aircraft power	d) TBD;	system							
	mechanic		supply	e) Disconnect PSF and aircraft	interconnecti							
	al/electric		redundancy is	electric power network;	on and							

				Failure Mod	de and Effects A	nalysis (FMEA)					
System: el	ectric power	system		Component: PSF					Componen	nt No.:		
Subsystem	n: BQT start	and powe	er generation	Component function: supply AC po	ower and APU s	tarting torque	ATA No.: 24	-20	Drawing N	o. and revision:		
system	I	ı	1		T	<u> </u>		T		1	T	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrence	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	probability of	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		failure mode		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode				
			c) Final effect	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H				
			(for aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	al failure.		decreased.	f) Replace PSF.	power supply							
					are in normal							
					condition							
24-20-13	PSF APU	All	a) PSF cannot	a) CAS: APU GEN FAULT;	a) Yes;	None.	43.5	10.2	5	5.1E-5	IV	
-01.02	start		start APU;	b) Malfunctions of SQEP, SPU,	b) PVGC							

				Failure Mod	le and Effects A	nalysis (FMEA)					
System: e	lectric power	system		Component: PSF					Componen	nt No.:		
Subsyster	n: BQT start	and powe	er generation	Component function: supply AC po	ower and APU s	tarting torque	ATA No.: 24	-20	Drawing N	o. and revision:		
system		1	1					1		1	T	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrence	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	probability of	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		failure mode		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode				
			c) Final effect	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H				
			(for aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	malfuncti		b) PSF cannot	etc.	and PBED is							
	on. supply AC			c) Try to reset PSF via PSF	in normal							
	Failure power due to			control switch, if warning	condition,							
	cause:		APU start	information still exists,	and electric							
	PSF		failure;	disconnect the PSF;	power							
	mechanic		c) APU fails, and	d) TBD;	system							

				Failure Mod	le and Effects A	nalysis (FMEA)					
System: e	lectric power	system		Component: PSF					Componen	t No.:		
Subsysten	n: BQT start	and powe	er generation	Component function: supply AC po	ower and APU s	tarting torque	ATA No.: 24	-20	Drawing No	o. and revision:		
system												
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirement	Effect	Single	Failure	Exposure	Occurrence	Hazard	Remark
No.	modes	phase	a) Local effect	actions	s for	caused by	component	rate of	time (H)	probability of	level	
	and		b) Higher-level	a) Provide indication to the flight	dispatch with	cascaded/	failure rate	failure		failure mode		
	causes		effect	crew;	failure	concurrent	(1E-6/H)	mode				
			c) Final effect	b) Other failures with same	a) Yes, the	hazardous		(1E-6/H				
			(for aircraft)	indication;	aircraft can	failures)				
				c) Failure identification, isolation	be							
				and corrective actions made by	dispatched							
				flight crew;	b) If "yes",							
				d) Effect caused by possible	what							
				improper actions;	restrictions							
				e) Fault isolation—maintenance	apply							
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	al/electric		aircraft power	e) Disconnect PSF and aircraft	interconnecti							
	al failure.		supply	electric power network;	on and							
			redundancy is	f) Replace PSF.	power supply							
			decreased.		are in normal							
					condition							

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: el	ectric power	system		Component: SQEP					Componen	it No.:		
Subsystem	n: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24-	-20	Drawing N	o. and revision	:	
system				and power generation system								
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
24-20-14	PSF	All	a) PSF cannot	a) CAS: APU GEN FAULT;	a) Yes;						IV	
-01.01	unable to		start APU;	b) Malfunctions of PSF, SPU, etc.	b) PVGC and							
	start APU		b) PSF cannot	c) Try to reset PSF via PSF control	PBED is in	None. 48.62	48.62	15.45	6	9.27E-05		
	due to		supply AC	switch, if warning information still	normal		40.02	15.45	0	3.2.2		
	SQEP		power due to	exists, disconnect the PSF;	condition, and							
	failure.		APU start	d) TBD;	electric power							

				Failure Mode	and Effects Analy	vsis (FMEA)						
System: e	lectric power	system		Component: SQEP					Componen	nt No.:		
Subsysten	n: BQT start	and powe	er generation	Component function: provide control a and power generation system	and protection for	BQT start	ATA No.: 24	-20	Drawing N	o. and revision	ı:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	Failure		failure;	e) Disconnect PSF and aircraft	system							
	cause:		c) APU fails,	electric power network;	interconnectio							
	SQEP		and aircraft	f) Replace SQEP.	n and power							
	circuit		power supply		supply are in							
	failure.		redundancy is		normal							
			decreased.		condition							
24-20-14	PSF	All	a) PSF cannot	a) CAS: APU GEN FAULT;	a) Yes;	None.	48.62	3.6	2	7.2E-06	IV	

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: e	lectric power	system		Component: SQEP					Componer	nt No.:		
Subsyster	n: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24-	-20	Drawing N	o. and revision	n:	
system				and power generation system		,						
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
-01.02	unable to		supply AC	b) Malfunctions of PSF, AGC, etc.	b) PVGC and							
	supply		power.	c) Try to reset PSF via PSF control	PBED is in							
	power		b) PSF cannot	switch, if warning information still	normal							
	due to		replace faulty	exists, disconnect the PSF;	condition, and							
	SQEP		VFG to supply	d) TBD;	electric power							
	failure.		power;	e) Disconnect PSF and aircraft	system							
	Failure		c) Aircraft	electric power network;	interconnectio							
	cause:		power supply	f) Replace SQEP.	n and power							

				Failure Mode	and Effects Analy	vsis (FMEA)						
System: el	ectric power	system		Component: SQEP					Componen	t No.:		
Subsystem	n: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24	-20	Drawing No	o. and revision	:	
system				and power generation system								
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	SQEP		redundancy is		supply are in							
	circuit		decreased.		normal							
	failure.				condition							
24-20-14	PSF	All	a) PSF cannot	a) CAS: APU GEN FAULT;	a) Yes;						IV	
-01.03	complete		start APU and	b) Malfunctions of PSF, SPU, etc.	b) PVGC and	Nama	40.00	20.25		5.87E-05		
	malfuncti		supply AC	c) Try to reset PSF via PSF control	PBED is in	None.	48.62	29.35	2	J.07 L-03		
	on due to		power.	switch, if warning information still	normal							

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: e	lectric power	system		Component: SQEP					Componer	nt No.:		
Subsyster	m: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24-	-20	Drawing N	o. and revision	n:	
system	T	1		and power generation system							1	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	SQEP		b) PSF cannot	exists, disconnect the PSF;	condition, and							
	failure.		replace faulty	d) TBD;	electric power							
	Failure		VFG to supply	e) Disconnect PSF and aircraft	system							
	cause:		power;	electric power network;	interconnectio							
	SQEP		c) APU fails,	f) Replace SQEP.	n and power							
	circuit		and aircraft		supply are in							
	failure.		power supply		normal							
			redundancy is		condition							

				Failure Mode	and Effects Analy	vsis (FMEA)						
System: el	ectric power	system		Component: SQEP					Componen	t No.:		
Subsystem	n: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24-	-20	Drawing No	o. and revision	:	
system				and power generation system								
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
			d) Effect caused by possible	restrictions								
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
			decreased.									
24-20-14	SQEP	All	a) BQT start	a) CAS: APU GEN FAULT;	a) Yes;						IV	
-01.03	wrong		and power	b) Malfunctions of PSF, SPU, etc.	b) PVGC and	None. 4						
	control of		generation	c) Try to reset PSF via PSF control	PBED is in		48.62	0.0061	_	3.07E-08		
	PSF and		system	switch, if warning information still	normal		40.02	4	5	5.07 2 00		
	thus		malfunction;	exists, disconnect the PSF;	condition, and							
	entering		b) It may be	d) TBD;	electric power							

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: e	lectric power	system		Component: SQEP					Componen	t No.:		
Subsyster	n: BQT start	and powe	er generation	Component function: provide control a and power generation system	and protection for	BQT start	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	power		unable to start	e) Disconnect PSF and aircraft	system							
	generatio		APU, and	electric power network;	interconnectio							
	n mode.		cause loss of	f) Replace SQEP.	n and power							
	Failure		PSF power		supply are in							
	cause:		supply.		normal							
	SQEP		c) APU fails,		condition							
	circuit		and aircraft									
	failure.		power supply									

				Failure Mode	and Effects Analy	vsis (FMEA)						
System: el	ectric power	system		Component: SQEP					Componen	t No.:		
Subsystem	n: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24-	-20	Drawing No	o. and revision	:	
system				and power generation system								
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
			redundancy is									
			decreased.									
24-20-14	SQEP	All	a) BQT start	a) CAS: APU GEN FAULT;	a) Yes;						IV	
-01.04	wrong		and power	b) Malfunctions of PSF, SPU, etc.	b) PVGC and							
	control of		generation	c) Try to reset PSF via PSF control	PBED is in	None.	48.62	0.0037	5	1.85E-08		
	PSF and		system	switch, if warning information still	normal							
	thus		malfunction;	exists, disconnect the PSF;	condition, and							

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: e	lectric power	system		Component: SQEP					Componen	nt No.:		
	n: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24-	-20	Drawing N	o. and revisior	1:	
system				and power generation system				Ι		1		1
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	entering		b) It may be	d) TBD;	electric power							
	APU start		unable to start	e) Disconnect PSF and aircraft	system							
	mode.		APU, and	electric power network;	interconnectio							
	Failure		cause loss of	f) Replace SQEP.	n and power							
	cause:		PSF power		supply are in							
	SQEP		supply.		normal							
	circuit		c) APU fails,		condition							
	failure.		and aircraft									

				Failure Mode	and Effects Analy	sis (FMEA)						
System: el	ectric power	system		Component: SQEP					Componen	t No.:		
Subsystem	n: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24-	-20	Drawing No	o. and revision	:	
system				and power generation system								
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
			power supply									
			redundancy is									
			decreased.									
24-20-14	SQEP	All	a) BQT start	a) CAS: APU GEN FAULT;	a) Yes;						IV	
-01.05	launches		and power	b) TBD;	b) PVGC and	None	48.62	0.212	4	8.48E-07		
	warning		generation	c) Try to reset PSF via PSF control PBED is in None. 48.62				0.212	-			
	of start		system false	switch, if warning information still	normal							

				Failure Mode	and Effects Analy	sis (FMEA)						
System: e	lectric power	system		Component: SQEP					Componen	t No.:		
Subsysten	n: BQT start	and powe	er generation	Component function: provide control a	and protection for	BQT start	ATA No.: 24-	20	Drawing No	o. and revision	:	
system				and power generation system								
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	and		warning;	exists, disconnect the PSF;	condition, and							
	power		b) PSF may be	d) TBD;	electric power							
	generatio		disconnected	e) Disconnect PSF and aircraft	system							
	n system;		due to flight	electric power network;	interconnectio							
	Failure		crew wrong	f) Replace SQEP.	n and power							
	cause:		actions;		supply are in							
	SQEP		c) Minor		normal							
	circuit		increase of		condition							

				Failure Mode	and Effects Analy	sis (FMEA)						
System: e	lectric power	system		Component: SQEP					Componen	t No.:		
Subsysten	n: BQT start	and powe	er generation	Component function: provide control a	and protection for I	3QT start	ATA No.: 24-	-20	Drawing No	o. and revision	:	
system	_			and power generation system								
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	failure.		flight crew									
			work load, and									
			PSF failure									
			may be									
			caused by									
			flight crew									
			actions.									

				Failure Mod	de and Effects Analysi	s (FMEA)						
System: el	ectric power	system		Component: SAV generator					Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 2	Component function: supply AC pow	ver under emergency	power supply	ATA No.: 24-	-20	Drawing No	o. and revision	:	
				condition								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements for	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the aircraft	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	can be dispatched	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	b) If "yes", what	failures)				
				c) Failure identification, isolation								
				and corrective actions made by								
				flight crew;								
				d) Effect caused by possible								
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-15	SAV	All	a) SAV	a) None	a) No	None.	2.45	2.32	4000	9.28E-03	IV	Hidden
-01.01	generator		generator	b) None	b) Not applicable.							failure
	malfuncti		cannot supply	c) TBD								
	on.		AC power	d) TBD								
	Failure		when required;	e) Not applicable.								

				Failure Mod	le and Effects Analysi	s (FMEA)						
System: e	lectric power	system		Component: SAV generator					Componen	t No.:		
Subsyster	m: AC power	supply sy	vstem 2	Component function: supply AC pow	ver under emergency	power supply	ATA No.: 24-	-20	Drawing No	o. and revision	:	
		1		condition							T	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements for	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the aircraft	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	can be dispatched	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	b) If "yes", what	failures)				
				c) Failure identification, isolation	restrictions apply							
				and corrective actions made by								
				flight crew;								
				d) Effect caused by possible								
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	cause:		b) Electric	f) Replace SAV.								
	SAV		power									
	generator		system's									
	mechanic		power									
	al/electric		redundancy is									
	al failure.		decreased.									
			c) No effect.									

				Failure Mod	le and Effects Analysi	s (FMEA)						
System: el	ectric power	system		Component: SAV generator					Componen	t No.:		
Subsystem	n: AC power	supply sy	/stem 2	Component function: supply AC pow	ver under emergency	power supply	ATA No.: 24-	-20	Drawing No	o. and revision	:	
				condition								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements for	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the aircraft	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	can be dispatched	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	b) If "yes", what	failures)				
				c) Failure identification, isolation	restrictions apply							
				and corrective actions made by								
				flight crew;								
				d) Effect caused by possible								
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-15	SAV	All	a) SAV	a) None	a) No	None.	2.45	0.0145	4000	5.8E-05	IV	Hidden
-01.02	lever		generator	b) None	b) Not applicable.							failure
	failure.		cannot supply	c) TBD								
	Failure		AC power	d) TBD								
	cause:		when required;	e) Not applicable.								
	SAV		b) Electric	f) Replace SAV.								
	generator		power									

				Failure Mod	de and Effects Analysi	s (FMEA)						
System: e	lectric power	system		Component: SAV generator			,		Componen	t No.:		
Subsysten	n: AC power	supply sy	stem 2	Component function: supply AC pow	ver under emergency	power supply	ATA No.: 24	-20	Drawing No	o. and revision	:	
		1		condition	1			1			ı	1
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements for	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the aircraft	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	can be dispatched	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	b) If "yes", what	failures)				
				c) Failure identification, isolation	restrictions apply							
				and corrective actions made by								
				flight crew;								
				d) Effect caused by possible								
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	mechanic		system's									
	al/electric		power									
	al failure. redundancy is											
		decreased.										
			c) No effect.									
24-20-15	SAV	All	a) SAV	a) None	a) No	None.	2.45	0.059	4000	2.36E-04	IV	Hidden

				Failure Mod	le and Effects Analysi	s (FMEA)						
System: e	lectric power	system		Component: SAV generator					Componen	t No.:		
Subsyster	n: AC power	supply sy	stem 2	Component function: supply AC pow	ver under emergency	power supply	ATA No.: 24-	-20	Drawing No	o. and revision	:	
	_	•		condition								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements for	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the aircraft	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	can be dispatched	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	failures)					
				c) Failure identification, isolation								
				and corrective actions made by								
				flight crew;								
				d) Effect caused by possible								
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
-01.03	gearbox		generator	b) None	b) Not applicable.							failure
	failure.		cannot supply	c) TBD								
	Failure		AC power	d) TBD								
	cause:		when required;	e) Not applicable.								
	SAV		b) Electric	f) Replace SAV.								
	generator		power									
	mechanic		system's									

				Failure Mod	de and Effects Analys	s (FMEA)						
System: el	ectric power	system		Component: SAV generator					Componen	t No.:		
Subsystem	n: AC power	supply sy	/stem 2	Component function: supply AC pow	ver under emergency	power supply	ATA No.: 24	-20	Drawing N	o. and revision	:	
	Γ	ı	Γ	condition	T	Γ				T	T	1
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements for	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the aircraft	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	can be dispatched	hazardous		(1E-6/H		mode		
			(for aircraft))				
				c) Failure identification, isolation	restrictions apply							
				and corrective actions made by								
				flight crew;								
				d) Effect caused by possible								
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	al/electric		power									
	al failure.		redundancy is									
	decreased.											
			c) No effect.									
24-20-15	SAV	All	a) SAV	a) CAS: SAV HEAT FAULT	a) No	None.	2.45	0.06	15	9.00E-07	IV	
-01.04	heater		generator	b) None	b) Not applicable.							

				Failure Mod	le and Effects Analysi	s (FMEA)						
System: e	lectric power	system		Component: SAV generator					Componen	t No.:		
Subsyster	n: AC power	supply sy	stem 2	Component function: supply AC pow	ver under emergency	power supply	ATA No.: 24-	-20	Drawing No	o. and revision	:	
	_			condition				_				
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements for	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the aircraft	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	can be dispatched	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;								
				c) Failure identification, isolation								
				and corrective actions made by								
				flight crew;								
				d) Effect caused by possible								
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	failure.		cannot supply	c) TBD								
	Failure		power properly	d) TBD								
	cause:		due to icing;	e) Not applicable.								
	SAV		b) Electric	f) Replace SAV.								
	electrical		power									
	failure.		system's									
			power									

				Failure Mod	de and Effects Analys	is (FMEA)						
System: 6	electric power	system		Component: SAV generator					Componen	t No.:		
Subsyste	m: AC power	supply s	ystem 2	Component function: supply AC pov	ver under emergency	power supply	ATA No.: 24	-20	Drawing N	o. and revision	i:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements for	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the aircraft	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	can be dispatched	hazardous		(1E-6/H		mode		
			(for aircraft)	indication; b) If "yes", what c) Failure identification, isolation restrictions apply)				
				c) Failure identification, isolation								
				and corrective actions made by								
				flight crew;								
				d) Effect caused by possible								
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			redundancy is									
			decreased.									
			c) No effect.									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: SAV GCU					Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 2	Component function: control and protect	tion of SAV gener	ator	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper dispatched failures actions; b) If "yes",)				
				e) Fault isolation—maintenance what								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-16	SAV	All	a) SAV	a) Electric power system OMS	a) No	None.	0.84	0.262	15	3.93E-6	IV	
-01.01	GCU		generator	information;	b) Not							
	malfuncti		malfunction.	b) None	applicable.							
	on		b) Electric	c) TBD								
	(detectab		power	d) TBD								
	le via		system's	e) Not applicable.								
	BIT).		power	f) Replace SAV GCU.								
	Failure		redundancy is									
	cause:		decreased.									
	SAV		c) No effect.									

				Failure Mode a	nd Effects Analysi	s (FMEA)						
System: el	ectric power	system		Component: SAV GCU					Componen	t No.:		
Subsystem	: AC power	supply sy	/stem 2	Component function: control and protect	tion of SAV gener	ator	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance	apply							
				personnel;								
	GCU											
	circuit											
	failure.											
24-20-16	SAV	All	a) SAV	a) None	a) No	None.	0.84	0.477	4000	1.908E-3	IV	Hidden
-01.02	GCU		generator	b) None	b) Not							failure
	malfuncti		malfunction.	c) TBD	applicable.							
	on		b) Electric	d) TBD								
	(undetect		power	e) Not applicable.								
	able via		system's	f) Replace SAV GCU.								
	BIT).		power									
	Failure		redundancy is									

				Failure Mode a	nd Effects Analysi	s (FMEA)						
System: el	ectric power	system		Component: SAV GCU					Componen	t No.:		
Subsystem	n: AC power	supply sy	/stem 2	Component function: control and protect	tion of SAV gener	ator	ATA No.: 24-	-20	Drawing No	o. and revision		
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions; b) If "yes", e) Fault isolation—maintenance what								
				e) Fault isolation—maintenance								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	cause:		decreased.									
	SAV		c) No effect.									
	GCU											
	circuit											
	failure.											
24-20-16	SAV	All	a) SAV	a) Electric power system OMS	a) No	None.	0.84	0.1006	15	1.509E-6	IV	
-01.03	GCU		generator	information;	b) Not							
	failure		malfunction.	b) None	applicable.							
	occurs to		b) Electric	c) TBD								
	SAV		power	d) TBD								
	generator		system's	e) Not applicable.								

				Failure Mode a	nd Effects Analysi	s (FMEA)						
System: 6	electric power	system		Component: SAV GCU					Componen	t No.:		
Subsyste	m: AC power	supply sy	ystem 2	Component function: control and protect	tion of SAV gener	ator	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	excitation		power	f) Replace SAV GCU.								
			redundancy is									
	Failure		decreased.									
	cause:		c) No effect.									
	SAV											
	GCU											
	circuit											
	failure.											

				Failure Mode a	and Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: actuator					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 2	Component function: release control	ol of SAV generato	r	ATA No.: 24-	-20	Drawing No	o. and revision		
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-17	SAV	All	a) SAV	a) None	a) No	None.	2.02	0.255	1500	3.825E-4	IV	Hidden
-01.01	cannot		generator failure	b) None	b) Not							failure
	be		due to being	c) TBD	applicable.							
	released		unable to	d) TBD								
	due to		release;	e) Not applicable.								
	actuator		b) Electric power	f) Replace actuator								

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: actuator					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 2	Component function: release contro	ol of SAV generato	r	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		1
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		1
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		1
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation								
				and corrective actions made by								
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	failure.		system's power									
	Failure		redundancy is									
	cause:		decreased.									
	actuator		c) No effect.									
	mechanic											
	al failure.											
24-20-17	SAV	All	a) SAV	a) None	a) No	None.	2.02	0.26	1500	3.9E-4	IV	Hidden

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: actuator					Componen	t No.:		
Subsyster	n: AC power	supply sys	stem 2	Component function: release control	ol of SAV generato	r	ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication; dispatched failures								
				c) Failure identification, isolation b) If "yes",								
				and corrective actions made by what								
				flight crew; restrictions								
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
-01.02	cannot		generator failure	b) None	b) Not							failure
	be		due to being	c) TBD	applicable.							
	released		unable to	d) TBD								
	due to		release;	e) Not applicable.								
	actuator		b) Electric power	f) Replace actuator								
	upper		system's power									
	lock		redundancy is									
	failure.		decreased.									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: actuator					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 2	Component function: release contro	I of SAV generato	r	ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	Failure		c) No effect.									
	cause:											
	actuator											
	electrical											
	failure.											
24-20-17	Failure of	All	a) SAV	a) None	a) No	None.	2.02	1.5	3500	5.25E-3	IV	Hidden
-01.03	automati		generator	b) None	b) Not							failure

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	lectric power	system		Component: actuator					Componen	t No.:		
Subsysten	n: AC power	supply sys	tem 2	Component function: release contro	I of SAV generato	r	ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	c release		cannot be	c) TBD	applicable.							
	thread		automatically	d) TBD								
	tube in		released;	e) Not applicable.								
	the		b) Flight crew	f) Replace actuator								
	actuator.		manually									
	Failure		release SAV									
	cause:		when required;									
	actuator		c) Minor effect.									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: actuator					Componen	t No.:		
Subsysten	n: AC power	supply sys	stem 2	Component function: release contro	I of SAV generato	r	ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	electrical											
	failure.											
24-20-17	Failure of	All	a) SAV	a) None	a) No	None.	2.02	0.0003	1500	4.5E-7	IV	Hidden
-01.03	manual		generator	b) None	b) Not							failure
	release		cannot be	c) TBD	applicable.							
	thread		manually	d) TBD								
	tube in		released;	e) Not applicable.								

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: e	ectric power	system		Component: actuator					Componen	t No.:		
Subsysten	n: AC power	supply sys	stem 2	Component function: release contro	l of SAV generato	r	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	the		b) Flight crew	f) Replace actuator								
	actuator.		cannot manually									
	Failure		release SAV									
	cause:		when required;									
	actuator		c) Minor effect.									
	electrical											
	failure.											

				Failure Mode a	and Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: SAV recovery control pane	el .				Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 2	Component function: recovery control o	f SAV generator		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-18	Recovery	All	a) Failure of	a) None	a) No	None.	0.038	0.038	1500	5.7E-5	IV	Hidden
-01.01	control		SAV generator	b) None	b) Not							failure
	panel		due to	c) TBD	applicable.							
	recovers		abnormal	d) TBD								
	SAV		recovery;	e) Not applicable.								
	without		b) Electric	f) Replace recovery control panel								
	comman		power									
	d.		system's									
	Failure		power									
	cause:		redundancy is									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: SAV recovery control pane	el				Componen	t No.:		
Subsyster	m: AC power	supply sy	ystem 2	Component function: recovery control o	f SAV generator		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	recovery		decreased.									
	control c) No effect.											
	panel											
	mechanic											
	al failure.											

				Failure Mode a	and Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PEUC					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 2	Component function: SAV automatic	c release control		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-19	PEUC	All	a) PEUC judges	a) None	a) No	None.	32.5	32	1500	0.048	IV	Hidden
-01.01	mistakenl		that aircraft is on	b) None	b) Not							failure
	y detects		ground, and	c) TBD	applicable.							
	that		cannot	d) TBD								
	aircraft is		automatically	e) Not applicable.								
	on		control the SAV	f) Replace PEUC.								

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PEUC					Componen	t No.:		
Subsysten	n: AC power	supply sys	tem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing No	o. and revisior	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	ground.		release when									
	Failure		required;									
	cause:		b) Under									
	PEUC		emergency									
	circuit		power supply									
	failure.		condition, flight									
			crew need to									
			manually									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PEUC					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			release SAV;									
			c) No effect.									
24-20-19	PEUC	All	a) Wrong	a) None	a) No	None.	32.5	0.25	1500	3.75E-4	IV	Hidden
-01.02	airspeed		airspeed signal	b) None	b) Not							failure
	signal		detected by	c) TBD	applicable.							
	detection		PEUC;	d) TBD								
	failure.		b) PEUC cannot	e) Not applicable.								

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PEUC					Componen	t No.:		
Subsysten	n: AC power	supply sys	tem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	Failure		control the SAV	f) Replace PEUC.								
	cause:		automatic									
	PEUC		release, or could									
	circuit		release SAV									
	failure.		when the									
			airspeed does									
			not meet specific									
			requirements									

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PEUC					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			c) No effect.									
24-20-19	PEUC	All	a) PEUC SAV	a) Electric power system OMS	a) No	None.	32.5	0.13	150	1.95E-5	IV	
-01.03	malfuncti		automatic	information;	b) Not							
	on.		release control	b) None	applicable.							
	Failure		and heating	c) TBD								
	cause:		control failure;	d) TBD								
	PEUC		b) It may cause	e) Not applicable.								

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	lectric power	system		Component: PEUC					Componen	t No.:		
Subsyster	n: AC power	supply sys	tem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	circuit		SAV generator	f) Replace PEUC.								
	failure.		failure due to									
			icing, and lead									
			to decrease in									
			electric power									
			system's power									
			redundancy.									
			c) No effect.									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PEUC					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-19	PEUC	All	a) PEUC	a) None	a) No	None.	32.5	0.0634	4500	2.853E-4	IV	Hidden
-01.04	mistakenl		mistakenly	b) None	b) Not							failure
	y detects		detects that	c) TBD	applicable.							
	that AGC		AGC is closed,	d) TBD								
	is closed.		so it considers	e) Not applicable.								
	Failure		that PSF is still	f) Replace PEUC.								
	cause:		serviceable;									
	PEUC		b) PEUC cannot									

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PEUC					Componen	t No.:		
Subsyster	n: AC power	supply sys	tem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	circuit		control SAV									
	failure.		automatic									
			release, and it									
			may require that									
			flight crew									
			manually									
			release SAV									
			under									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PEUC					Componen	t No.:		
Subsystem	n: AC power	supply sys	stem 2	Component function: SAV automatic	c release control		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by								
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			emergency									
			power supply									
			condition;									
			c) Minor									
			increase of flight									
			crew workload.									
24-20-19	PEUC	All	a) PEUC	a) None	a) No	None.	32.5	0.0634	4500	2.853E-4	IV	Hidden

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PEUC					Componen	t No.:		
Subsysten	n: AC power	supply sys	stem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation								
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
-01.05	mistakenl		mistakenly	b) None	b) Not							failure
	y detects		detects that	c) TBD	applicable.							
	that EQW		EQW is closed,	d) TBD								
	is closed.		so it considers	e) Not applicable.								
	Failure		that PVGC is still	f) Replace PEUC.								
	cause:		serviceable;									
	PEUC		b) PEUC cannot									
	circuit		control SAV									

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PEUC					Componen	t No.:		
Subsyster	n: AC power	supply sys	tem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;								
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	failure.		automatic									
			release, and it									
			may require that									
			flight crew									
			manually									
			release SAV									
			under									
			emergency									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: PEUC					Componen	t No.:		
Subsystem	n: AC power	supply sys	tem 2	Component function: SAV automatic	c release control		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by								
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			power supply									
			condition;									
			c) Minor									
			increase of flight									
			crew workload.									
24-20-19	PEUC	All	a) PEUC	a) None	a) No	None.	32.5	0.0634	4500	2.853E-4	IV	Hidden
-01.06	mistakenl		mistakenly	b) None	b) Not							failure

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PEUC					Componen	t No.:		
Subsyster	n: AC power	supply sys	tem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing N	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	y detects		detects that	c) TBD	applicable.							
	that RBD		RBD is closed,	d) TBD								
	is closed.		so it considers	e) Not applicable.								
	Failure		that PBED is still	f) Replace PEUC.								
	cause:		serviceable;									
	PEUC		b) PEUC cannot									
	circuit		control SAV									
	failure.		automatic									

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: PEUC					Componen	t No.:		
Subsyster	n: AC power	supply sys	stem 2	Component function: SAV automatic	c release control		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;								
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			release, and it									
			may require that									
			flight crew									
			manually									
			release SAV									
			under									
			emergency									
			power supply									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: 6	electric powe	r system		Component: PEUC					Componen	t No.:		
Subsyste	m: AC power	r supply sys	stem 2	Component function: SAV automati	c release control		ATA No.: 24	-20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			condition;									
			c) Minor									
			increase of flight									
			crew workload.									

				Failure Mode	and Effects Analy	sis (FMEA)						
System: el	ectric power	system		Component: SAV heating control relay	/				Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 2	Component function: SAV heating pov	ver supply on/off	control	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight								
				rew; what								
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
24-20-20	SAV	All	a) SAV heater	a) CAS: SAV HEAT FAULT	a) No	None.	4.48	2.24	15	3.36E-5	IV	
-01.01	heating		loses power	b) TBD;	b) Not							
	control		input;	c) TBD;	applicable.							
	relay is		b) It may	d) TBD;								
	opened		cause SAV	e) None;								
	due to		generator	f) Replace SAV heating control relay								
	failure		failure due to									

				Failure Mode	and Effects Analy	rsis (FMEA)						
System: el	ectric power	system		Component: SAV heating control relay	/				Componen	t No.:		
Subsystem	n: AC power	supply sy	stem 2	Component function: SAV heating pov	wer supply on/off o	control	ATA No.: 24-	-20	Drawing No	o. and revision		
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;								
				d) Effect caused by possible restrictions								
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	Failure		icing, and lead									
	cause:		to decrease in									
	relay		electric power									
	mechanic		system's									
	al/electric		power									
	al failure		redundancy.									
			c) No effect.									
24-20-20	SAV	All	a) SAV heating	a) CAS: SAV HEAT FAULT	a) No	None.	4.48	2.24	15	3.36E-5	No	

				Failure Mode	and Effects Analy	sis (FMEA)						
System: el	lectric power	system		Component: SAV heating control relay	/				Componen	t No.:		
Subsysten	n: AC power	supply sy	ystem 2	Component function: SAV heating pov	ver supply on/off	control	ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;								
				d) Effect caused by possible restrictions								
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
-01.02	heating		relay remains	b) TBD;	b) Not						effect	
	control		closed, and	c) TBD;	applicable.						on	
	relay is		SAV is	d) TBD;							safety	
	closed		constantly in	e) None;								
	due to		heating	f) Replace SAV heating control relay								
	failure.		condition;									
	Failure		b) No effect.									
	cause:		c) No effect.									
	relay											

				Failure Mode	and Effects Analy	/sis (FMEA)						
System: 6	electric power	system		Component: SAV heating control rela	у				Componen	t No.:		
Subsyste	m: AC power	supply sy	ystem 2	Component function: SAV heating por	wer supply on/off	control	ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
	(ioi aiiciaii)			corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	mechanic											
	al/electric											
	al failure											

				Failure Mode	and Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: SAV manual release con	trol switch		_		Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 2	Component function: SAV manual rele	ease control		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes", what							
				crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
24-20-21	SAV	All	a) Flight crew	a) None;	a) No	None.	0.1208	0.0604	4000	2.416E-4	IV	Hidden
-01.01	manual		cannot	b) None;	b) Not							failure
	release		manually	c) None;	applicable.							
	switch is		release SAV;	d) TBD;								
	disconne		b) SAV is	e) None;								
	cted due		automatically	f) Replace control switch.								
	to failure.		released only;									

				Failure Mode	and Effects Analysi	s (FMEA)						
System: el	ectric power	system		Component: SAV manual release con	trol switch				Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 2	Component function: SAV manual rele	ease control		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes", what							
				crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	Failure		c) No effect.									
	cause:											
	switch											
	mechanic											
	al failure.											
24-20-21	SAV	All	a) SAV is	a) SAV is released by mistake;	a) No	None.	0.1208	0.0604	5	3.02E-7	IV	
-01.02	manual		released by	b) TBD;	b) Not							
	release		mistake;	c) None;	applicable.							

				Failure Mode	and Effects Analysi	s (FMEA)						
System: el	lectric power	system		Component: SAV manual release con	trol switch				Componen	t No.:		
Subsysten	n: AC power	supply sy	stem 2	Component function: SAV manual rele	ease control		ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch with	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes", what							
				crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	switch is		b) No effect;	d) None;								
	closed		c) Minor effect	e) Try to recover SAV;								
	due to		on aircraft	f) Replace control switch.								
	failure.		aerodynamics									
	Failure		performance.									
	cause:											
	switch											
	mechanic											
	al failure.											

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: SAV reset switch					Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 2	Component function: SAV reset control			ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-22	Abnormal	All	a) Abnormal	a) None;	a) No	None.	0.362	0.362	4000	1.448E-3	IV	Hidden
-01.01	comman		reset after	b) None;	b) Not							failure
	d of SAV		SAV is	c) None;	applicable.							
	reset		released;	d) TBD;								
	switch		b) It may	e) None;								
	Failure		cause SAV	f) Replace control switch.								
	cause:		generator									
	switch		failure, and									
	mechanic		lead to									
	al failure.		decrease in									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: SAV reset switch					Componen	t No.:		
Subsyster	m: AC power	supply sy	ystem 2	Component function: SAV reset control			ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
	(for aircraft)			d) Effect caused by possible improper	dispatched	failures)				
	(for aircraft)			actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
			electric power									
	system's											
	power											
			redundancy;									
			c) No effect.									

				Failure Mode a	ind Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: GRPE					Componen	t No.:		
Subsysten	n: AC power	supply sys	stem 2	Component function: on/off co	ntrol between SA\	/ generator	ATA No.: 24	-20	Drawing No	o. and revision	:	
				and 3-Phase AC ESS Bus								
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level effect	a) Provide indication to the	with failure	cascaded/	failure rate	failure		probability		
	causes		c) Final effect (for	flight crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			aircraft)	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
				indication;	dispatched	failures)				
				c) Failure identification,	b) If "yes",							
				isolation and corrective	what							
				actions made by flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
24-20-23	GRPE is	All	a) GRPE remains	a) CAS: AC ESS BUS;	a) No	None.	3	1.5	5	7.5E-6	IV	
-01.01	closed		closed, and L AC Bus	b) TBD;	b) Not							
	due to		or R AC Bus cannot	c) TBD;	applicable.							

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: e	electric power	system		Component: GRPE					Componen	t No.:		
Subsyster	m: AC power	supply sys	etem 2	Component function: on/off co	ntrol between SA\	/ generator	ATA No.: 24	-20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level effect	a) Provide indication to the	with failure	cascaded/	failure rate	failure		probability		
	causes		c) Final effect (for	flight crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			aircraft)	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
				indication;	dispatched	failures)				
				c) Failure identification,	b) If "yes",							
				isolation and corrective	what							
				actions made by flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	failure.		supply power to	d) TBD;								
	Failure		3-Phase AC ESS	e) TBD;								
	cause:		Bus;	f) Replace GRPE.								
	GRPE		b) It may cause									
	mechanic		disconnection of									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: 6	electric power	system		Component: GRPE					Componen	t No.:		
Subsyste	m: AC power	supply sys	stem 2	Component function: on/off co	ntrol between SA\	/ generator	ATA No.: 24-	-20	Drawing No	o. and revisior	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level effect	a) Provide indication to the	with failure	cascaded/	failure rate	failure		probability		
	causes		c) Final effect (for	flight crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			aircraft)	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
				indication;	dispatched	failures)				
				c) Failure identification,	b) If "yes",							
				isolation and corrective								
				actions made by flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	al/electric		3-Phase AC ESS Bus									
	al failure.		power supply;									
			c) It may cause power									
			supply disconnection									
			of partial AC power									

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	lectric power	system		Component: GRPE					Componen	t No.:		
Subsysten	n: AC power	supply sys	tem 2	Component function: on/off co	ntrol between SA\	/ generator	ATA No.: 24-	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level effect	a) Provide indication to the	with failure	cascaded/	failure rate	failure		probability		
	causes		c) Final effect (for	flight crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			aircraft)	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
				indication;	dispatched	failures)				
				c) Failure identification,	b) If "yes",							
				isolation and corrective	what							
				actions made by flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
			users									
24-20-23	GRPE is	All	a) GRPE remains	a) None;	a) No;	None.	3	1.5	3500	5.25E-3	IV	Hidden
-01.02	disconne		disconnected, and	b) None;	b) Not							failure
	cted due		SAV generator cannot	c) None;	applicable.							

				Failure Mode a	and Effects Analysi	is (FMEA)						
System: e	lectric power	system		Component: GRPE					Componen	t No.:		
Subsyster	m: AC power	supply sys	etem 2	Component function: on/off co	ntrol between SA\	/ generator	ATA No.: 24	-20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level effect	a) Provide indication to the	with failure	cascaded/	failure rate	failure		probability		
	causes		c) Final effect (for	flight crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			aircraft)	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
				indication;	dispatched	failures)				
				c) Failure identification,	b) If "yes",							
				isolation and corrective	what							
				actions made by flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	to failure.		connect with 3-Phase	d) TBD;								
	Failure		AC ESS Bus;	e) TBD;								
	cause:		b) Under emergency	f) Replace GRPE.								
	GRPE		power supply									
	mechanic		condition, SAV									

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	electric power	system		Component: GRPE					Componen	t No.:		
Subsyster	m: AC power	supply sys	etem 2	Component function: on/off co	ntrol between SA\	/ generator	ATA No.: 24	-20	Drawing N	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level effect	a) Provide indication to the	with failure	cascaded/	failure rate	failure		probability		
	causes		c) Final effect (for	flight crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			aircraft)	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
				indication;	dispatched	failures)				
				c) Failure identification,								
				isolation and corrective								
				actions made by flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
	al/electric		generator cannot									
	al failure.		supply power to									
			3-Phase AC ESS									
			Bus;									
			c) Under emergency									

				Failure Mode a	nd Effects Analysi	is (FMEA)						
System: e	electric power	system		Component: GRPE					Componen	t No.:		
Subsyster	m: AC power	supply sys	etem 2	Component function: on/off co	ntrol between SA\	/ generator	ATA No.: 24	-20	Drawing No	o. and revisior	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level effect	a) Provide indication to the	with failure	cascaded/	failure rate	failure		probability		
	causes		c) Final effect (for	flight crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			aircraft)	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
				indication;	dispatched	failures)				
				c) Failure identification,	b) If "yes",							
				isolation and corrective	what							
				actions made by flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
			power supply									
			condition, power									
			outage occurs to the									
			3-Phase AC ESS Bus									
			power supply									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: 6	electric powe	r system		Component: GRPE					Componen	t No.:		
Subsyste	m: AC power	supply sys	stem 2	Component function: on/off co	ntrol between SA\	/ generator	ATA No.: 24	-20	Drawing No	o. and revisior	n:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level effect	a) Provide indication to the	with failure	cascaded/	failure rate	failure		probability		
	causes		c) Final effect (for	flight crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			aircraft)	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
				indication;	dispatched	failures)				
				c) Failure identification,	b) If "yes",							
				isolation and corrective	what							
				actions made by flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault								
				isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance								
				personnel;								
			equipment									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: GRPE control relay					Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 2	Component function: GRPE on/off conti	rol		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-24	GRPE	All	a) GRPE	a) CAS: AC ESS BUS;	a) No;	None.	0.711	0.356	5	1.78E-6	IV	
-01.01	control		remains	b) TBD;	b) Not							
	relay is		closed, and L	c) TBD;	applicable.							
	closed		AC Bus or R	d) TBD;								
	due to		AC Bus cannot	e) TBD;								
	failure.		supply power	f) Replace relay.								
	Failure		to 3-Phase AC									
	cause:		ESS Bus;									
	relay		b) It may									
	mechanic		cause									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: GRPE control relay					Componen	t No.:		
Subsystem	n: AC power	supply sy	vstem 2	Component function: GRPE on/off conti	rol		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	al/electric		disconnection									
	al failure		of 3-Phase AC									
			ESS Bus									
			power supply;									
			c) It may									
			cause power									
			supply									
			disconnection									
			of partial AC									
			power users									
24-20-24	GRPE	All	a) GRPE	a) None	a) No;	None.	0.711	0.356	4500	1.602E-3	IV	Hidden

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: GRPE control relay					Componen	t No.:		
Subsyster	n: AC power	supply sy	vstem 2	Component function: GRPE on/off conti	rol		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
-01.02	control		remains	b) None	b) Not							failure
	relay is		disconnected,	c) None	applicable.							
	disconne		and SAV	d) TBD								
	cted due		generator	e) TBD;								
	to failure.		cannot	f) Replace relay.								
	Failure		connect with									
	cause:		3-Phase AC									
	relay		ESS Bus;									
	mechanic		b) Under									
	al/electric		emergency									
	al failure		power supply									
			condition, SAV									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: GRPE control relay					Componen	t No.:		
Subsyster	n: AC power	supply sy	/stem 2	Component function: GRPE on/off conti	rol		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
			generator									
			cannot supply									
			power to									
			3-Phase AC									
			ESS Bus;									
			c) Under									
			emergency									
			power supply									
			condition,									
			power outage									
			occurs to the									
			3-Phase AC									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: GRPE control relay					Componen	t No.:		
Subsyster	n: AC power	supply sy	/stem 2	Component function: GRPE on/off contr	rol		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew; aircraft can be hazardous				(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper dispatched failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
			ESS Bus									
			power supply									
			equipment									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: static inverter					Componen	t No.:		
Subsystem	n: AC power	supply sy	vstem 2	Component function: supply single phase	se AC power		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-25	Static	All	a) Static	a) CAS: INVERTER FAULT;	a) No;	None.	20.5	20.5	4	8.2E-5	IV	
-01.01	inverter		inverter unable	b) None;	b) Not							
	unable to		to supply AC	c) None;	applicable.							
	supply		power;	d) TBD;								
	AC		b) Under	e) TBD;								
	power.		emergency	f) Replace static inverter.								
	Failure		power supply									
	cause:		condition, prior									
	static		to releasing									
	inverter		SAV and									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: static inverter					Componen	t No.:		
Subsyster	n: AC power	supply sy	ystem 2	Component function: supply single phase	se AC power		ATA No.: 24	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	electrical		before SAV									
	failure.		becomes									
			available, key									
			single-phase									
			AC bus power									
			supply is									
			disconnected;									
			c) Under									
			emergency									
			power supply									
			condition, the									
			power									

				Failure Mode a	and Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: static inverter					Componen	t No.:		
Subsyster	n: AC power	supply sy	/stem 2	Component function: supply single phase	se AC power		ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remark
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
			interruption									
			duration of									
			power users									
			connected to									
			the key									
			single-phase									
			AC bus									
			exceeds the									
			maximum									
			allowable									
			value									

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: el	ectric power	system		Component: TDPBE 1					Componen	t No.:		
Subsystem	: AC power	supply sy	ystem 1	Component function: PBED feeder I	ine current detecti	on	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
24-20-26	Current	All	a) Wrong PBED	a) CAS: R GEN FAULT;	a) Yes;	None.	0.00247	0.0024	4	4.94E-9	IV	
-01.01	detection		feeder line current	Malfunctions of TDPBE 2, etc.	b) PVGC and			7				
	failure of		is detected by	c) Try to reset PBED, if failure still	PSF is in							
	current		GRFS;	exists, disconnect the PBED;	normal							
	transform		b) It may cause	d) TBD;	condition, and							
	er.		GRFS's electrical	e) TBD;	electric power							

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	lectric power	system		Component: TDPBE 1					Componen	t No.:		
Subsysten	n: AC power	supply sy	/stem 1	Component function: PBED feeder I	ine current detecti	on	ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
	Failure		protection to the	f) Replace current transformer.	system							
	cause:		PBED, PBED		interconnectio							
	current		failure, or		n and power							
	transform		decrease in the		supply are in							
	er		electric power		normal							
	electrical		system's power		condition.							
	failure.		redundancy;									
			c) Under									

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	lectric power	system		Component: TDPBE 1					Componen	t No.:		
Subsysten	n: AC power	supply sy	vstem 1	Component function: PBED feeder I	ine current detecti	on	ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			emergency power									
			supply condition,									
			the power									
			interruption									
			duration of power									
			users connected									
			to the key									
			single-phase AC									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: e	lectric power	system		Component: TDPBE 1					Componen	t No.:		
Subsyster	m: AC power	supply sy	ystem 1	Component function: PBED feeder I	ine current detect	on	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	actions	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	a) Provide indication to the flight	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	crew;	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect (for	b) Other failures with same	aircraft can be	hazardous		(1E-6/H		mode		
			aircraft)	indication;	dispatched	failures)				
				c) Failure identification, isolation	b) If "yes",							
				and corrective actions made by	what							
				flight crew;	restrictions							
				d) Effect caused by possible	apply							
				improper actions;								
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective								
				actions—maintenance personnel;								
			bus exceeds the									
			maximum									
			allowable value									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: TDPBE 2					Componen	t No.:		
Subsystem	: AC power	supply sy	stem 1	Component function: PBED feeder line	current detection		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-27	Current	All	a) Wrong	a) CAS: R GEN FAULT;	a) Yes;	None.	0.00247	0.0024	4	4.94E-9	IV	
-01.01	detection		PBED feeder	Malfunctions of TDPBE 1, etc.	b) PVGC and			7				
	failure of		line current is	c) Try to reset PBED, if failure still	PSF is in							
	current		detected by	exists, disconnect the PBED;	normal							
	transform		GRFS;	d) TBD;	condition, and							
	er.		b) It may	e) TBD;	electric power							
	Failure		cause GRFS's	f) Replace current transformer.	system							
	cause:		electrical		interconnectio							
	current		protection to		n and power							
	transform		the PBED,		supply are in							

				Failure Mode a	nd Effects Analysi	s (FMEA)						
System: e	lectric power	system		Component: TDPBE 2					Componen	t No.:		
Subsysten	n: AC power	supply sy	stem 1	Component function: PBED feeder line	current detection		ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	er		PBED failure,		normal							
	electrical		or decrease in		condition.							
	failure.		the electric									
			power									
			system's									
			power									
			redundancy;									
			c) Under									
			emergency									
			power supply									
			condition, the									
			power									

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	lectric power	r system		Component: TDPBE 2					Componen	t No.:		
Subsyster	n: AC power	supply sy	ystem 1	Component function: PBED feeder line	current detection		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
			interruption									
			duration of									
			power users									
			connected to									
			the key									
			single-phase									
			AC bus									
			exceeds the									
			maximum									
			allowable									
			value									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: NDPBE 1					Componen	t No.:		
Subsystem	: AC power	supply sy	ystem 1	Component function: PVGC feeder line	current detection		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-28	Current	All	a) Wrong	a) CAS: L GEN FAULT;	a) Yes;	None.	0.00247	0.0024	4	4.94E-9	IV	
-01.01	detection		PVGC feeder	b) Malfunctions of NDPBE 2, etc.	b) PBED and			7				
	failure of		line current is	c) Try to reset PVGC, if failure still	PSF is in							
	current		detected by	exists, disconnect the PVGC;	normal							
	transform		APBE;	d) TBD;	condition, and							
	er.		b) It may	e) TBD;	electric power							
	Failure		cause APBE's	f) Replace current transformer.	system							
	cause:		electrical		interconnectio							
	current		protection to		n and power							
	transform		the PVGC,		supply are in							

				Failure Mode a	nd Effects Analysi	s (FMEA)						
System: e	lectric power	system		Component: NDPBE 1					Componen	t No.:		
Subsysten	n: AC power	supply sy	stem 1	Component function: PVGC feeder line	current detection		ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
				e) Fault isolation—maintenance	what							
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	er		PVGC failure,		normal							
	electrical		or decrease in		condition.							
	failure.		the electric									
			power									
			system's									
			power									
			redundancy;									
			c) Under									
			emergency									
			power supply									
			condition, the									
			power									

				Failure Mode a	nd Effects Analysi	s (FMEA)						
System: e	lectric power	system		Component: NDPBE 1					Componen	t No.:		
Subsysten	n: AC power	supply sy	vstem 1	Component function: PVGC feeder line	current detection		ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;								
				e) Fault isolation—maintenance								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
			interruption									
			duration of									
			power users									
			connected to									
			the key									
			single-phase									
			AC bus									
			exceeds the									
			maximum									
			allowable									
			value									

				Failure Mode a	nd Effects Analys	is (FMEA)						
System: el	ectric power	system		Component: NDPBE 2					Componen	t No.:		
Subsystem	n: AC power	supply sy	ystem 1	Component function: PVGC feeder lin	e current detectio	n	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
24-20-29	Current	All	a) Wrong PVGC	a) CAS: L GEN FAULT;	a) Yes;	None.	0.00247	0.0024	4	4.94E-9	IV	
-01.01	detection		feeder line	b) Malfunctions of NDPBE 1, etc.	b) PBED and			7				
	failure of		current is	c) Try to reset PVGC, if failure still	PSF is in							
	current		detected by	exists, disconnect the PVGC;	normal							
	transform		APBE;	d) TBD;	condition, and							
	er.		b) It may cause	e) TBD;	electric power							
	Failure		APBE's	f) Replace current transformer.	system							

				Failure Mode a	nd Effects Analysi	s (FMEA)						
System: el	lectric power	system		Component: NDPBE 2					Componen	t No.:		
Subsysten	n: AC power	supply sy	/stem 1	Component function: PVGC feeder lin	e current detectio	n	ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
	cause:		electrical		interconnectio							
	current		protection to the		n and power							
	transform		PVGC, PVGC		supply are in							
	er		failure, or		normal							
	electrical		decrease in the		condition.							
	failure.		electric power									
			system's power									
			redundancy;									
			c) Under									

				Failure Mode a	nd Effects Analysi	s (FMEA)						
System: el	lectric power	system		Component: NDPBE 2					Componen	t No.:		
Subsysten	n: AC power	supply sy	/stem 1	Component function: PVGC feeder lin	e current detectio	n	ATA No.: 24	-20	Drawing No	o. and revision	1:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
			emergency									
			power supply									
			condition, the									
			power									
			interruption									
			duration of									
			power users									
			connected to the									
			key									

				Failure Mode a	nd Effects Analys	s (FMEA)						
System: e	lectric power	system		Component: NDPBE 2					Componen	t No.:		
Subsyster	n: AC power	supply sy	vstem 1	Component function: PVGC feeder lin	e current detectio	n	ATA No.: 24-	-20	Drawing No	o. and revision	:	
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	Requirements	Effect	Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	crew;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	b) Other failures with same	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	indication;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	c) Failure identification, isolation and	dispatched	failures)				
				corrective actions made by flight	b) If "yes",							
				crew;	what							
				d) Effect caused by possible	restrictions							
				improper actions;	apply							
				e) Fault isolation—maintenance								
				personnel;								
				f) Corrective actions—maintenance								
				personnel;								
			single-phase AC									
			bus exceeds the									
			maximum									
			allowable value									

	Failure Mode and Effects Analysis (FMEA)											
System: el	ectric power	system		Component: BDPBE 1					Component No.:			
Subsystem: AC power supply system 1			stem 1	Component function: PSF feeder line current detection			ATA No.: 24-	-20	Drawing No. and revision:			
FMEA	Failure	Flight	Failure effect	Identification and corrective actions Requirements Effect Sin		Single	Failure	Exposure	Occurrenc	Hazard	Remar	
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	dispatched	failures)				
				actions;	b) If "yes",							
			e) Fault isolation—maintenance	what								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-30	Current	All	a) Wrong PSF	a) CAS: APU GEN FAULT;	a) Yes;	None.	0.00247	0.0024	4	4.94E-9	IV	
-01.01	detection		feeder line	b) Malfunctions of BDPBE 2, etc.;	b) PVGC and			7				
	failure of		current is	c) Try to reset PSF, if failure still	PBED is in							
	current		detected by	exists, disconnect the PSF;	normal							
	transform		SQEP;	d) TBD;	condition, and							
	er.		b) It may	e) TBD;	electric power							
	Failure		cause SQEP's	f) Replace current transformer.	system							
	cause:		electrical		interconnectio							
	current		protection to		n and power							
	transform		the PSF, PSF		supply are in							

	Failure Mode and Effects Analysis (FMEA)											
System: el	lectric power	system		Component: BDPBE 1					Component No.:			
Subsystem: AC power supply system 1				Component function: PSF feeder line current detection			ATA No.: 24	-20	Drawing No. and revision:			
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	dentification and corrective actions Requirements Effect			Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	aircraft can be	hazardous		(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper	l) Effect caused by possible improper dispatched failures)				
				actions; b) If "yes",								
				e) Fault isolation—maintenance what								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	er		failure, or		normal							
	electrical		decrease in		condition							
	failure.		the electric									
			power									
			system's									
			power									
			redundancy;									
			c) Under									
			emergency									
			power supply									
			condition, the									
			power									

	Failure Mode and Effects Analysis (FMEA)											
System: e	lectric power	system		Component: BDPBE 1					Component No.:			
Subsystem: AC power supply system 1			vstem 1	Component function: PSF feeder line current detection			ATA No.: 24-	-20	Drawing No. and revision:			
FMEA	Failure	Flight	Failure effect	Identification and corrective actions Requirements Effect Sir			Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew; aircraft can be hazardous			(1E-6/H		mode			
			(for aircraft)	d) Effect caused by possible improper dispatched failures)					
				actions; b) If "yes",								
				e) Fault isolation—maintenance what								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
			interruption									
			duration of									
			power users									
			connected to									
			the key									
			single-phase									
			AC bus									
			exceeds the									
			maximum									
			allowable									
			value									

	Failure Mode and Effects Analysis (FMEA)											
System: el	ectric power	system		Component: BDPBE 2					Component No.:			
Subsystem: AC power supply system 1			ystem 1	Component function: PSF feeder line current detection			ATA No.: 24-20		Drawing No. and revision:			
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	corrective actions Requirements Effect		Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
	c) Final effect corrective actions made by flight crew; aircraft can be hazardous		hazardous		(1E-6/H		mode					
			(for aircraft)	raft) d) Effect caused by possible improper dispatched failu		failures)				
				actions;	b) If "yes",							
	e) Fault isolation—mair		e) Fault isolation—maintenance	what								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
24-20-31	Current	All	a) Wrong PSF	a) CAS: APU GEN FAULT;	a) Yes;	None.	0.00247	0.0024	4	4.94E-9	IV	
-01.01	detection		feeder line	b) Malfunctions of BDPBE 1, etc.;	b) PVGC and			7				
	failure of		current is	c) Try to reset PSF, if failure still	PBED is in							
	current		detected by	exists, disconnect the PSF;	normal							
	transform		SQEP;	d) TBD;	condition, and							
	er.		b) It may	e) TBD;	electric power							
	Failure		cause SQEP's	f) Replace current transformer.	system							
	cause:		electrical		interconnectio							
	current		protection to		n and power							
	transform		the PSF, PSF		supply are in							

	Failure Mode and Effects Analysis (FMEA)											
System: el	lectric power	system		Component: BDPBE 2					Component No.:			
Subsystem: AC power supply system 1				Component function: PSF feeder line current detection			ATA No.: 24	-20	Drawing No. and revision:			
FMEA	Failure	Flight	Failure effect	Identification and corrective actions	dentification and corrective actions Requirements Effect			Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew;	orrective actions made by flight crew; aircraft can be hazardous			(1E-6/H		mode		
			(for aircraft)	d) Effect caused by possible improper) Effect caused by possible improper dispatched failures)				
				actions;	actions; b) If "yes",							
				e) Fault isolation—maintenance what								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
	er		failure, or		normal							
	electrical		decrease in		condition							
	failure.		the electric									
			power									
			system's									
			power									
			redundancy;									
			c) Under									
			emergency									
			power supply									
			condition, the									
			power									

	Failure Mode and Effects Analysis (FMEA)											
System: e	lectric power	system		Component: BDPBE 2					Component No.:			
Subsystem: AC power supply system 1			vstem 1	Component function: PSF feeder line current detection			ATA No.: 24-	-20	Drawing No. and revision:			
FMEA	Failure	Flight	Failure effect	Identification and corrective actions Requirements Effect Sir			Single	Failure	Exposure	Occurrenc	Hazard	Remar
No.	modes	phase	a) Local effect	a) Provide indication to the flight crew;	for dispatch	caused by	component	rate of	time (H)	е	level	k
	and		b) Higher-level	b) Other failures with same indication;	with failure	cascaded/	failure rate	failure		probability		
	causes		effect	c) Failure identification, isolation and	a) Yes, the	concurrent	(1E-6/H)	mode		of failure		
			c) Final effect	corrective actions made by flight crew; aircraft can be hazardous			(1E-6/H		mode			
			(for aircraft)	d) Effect caused by possible improper dispatched failures)					
				actions; b) If "yes",								
				e) Fault isolation—maintenance what								
				personnel;	restrictions							
				f) Corrective actions—maintenance	apply							
				personnel;								
			interruption									
			duration of									
			power users									
			connected to									
			the key									
			single-phase									
			AC bus									
			exceeds the									
			maximum									
			allowable									
			value									