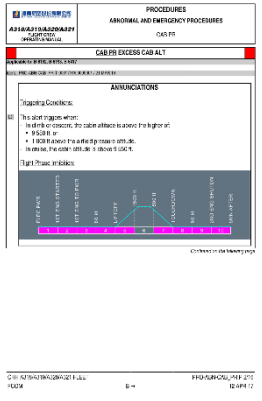
桂林航空
Air Guilin

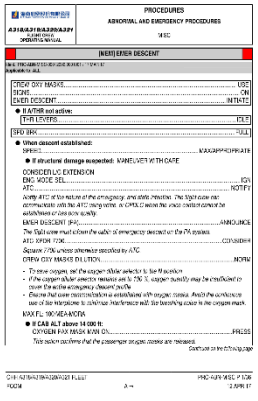
Depressurization & Smoke

Depressurization & Smoke

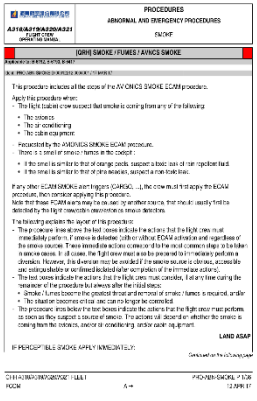
首先： 这是
At first: It is


PROCEDURES
ABNORMAL AND EMERGENCY PROCEDURES
CAB PR
CAB PR EXCESS CAB ALT
ANNUNCIATIONS

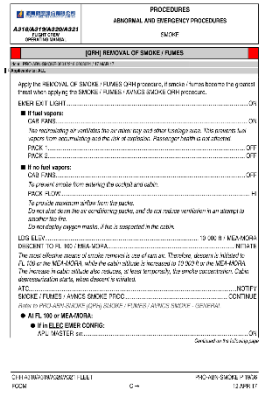
过高的机舱高度
EXCESS CAB ALT


PROCEDURES
ABNORMAL AND EMERGENCY PROCEDURES
[WERT] EMER DESCENT

紧急下降
EMER DESCENT


PROCEDURES
ABNORMAL AND EMERGENCY PROCEDURES
[GRH] SMOKE / FUMES / AVNCS SMOKE

烟雾/有毒气体/电子舱烟雾
SMOKE/FUMES/AVNCS SMOKE


PROCEDURES
ABNORMAL AND EMERGENCY PROCEDURES
[GRH] REMOVAL OF SMOKE / FUMES

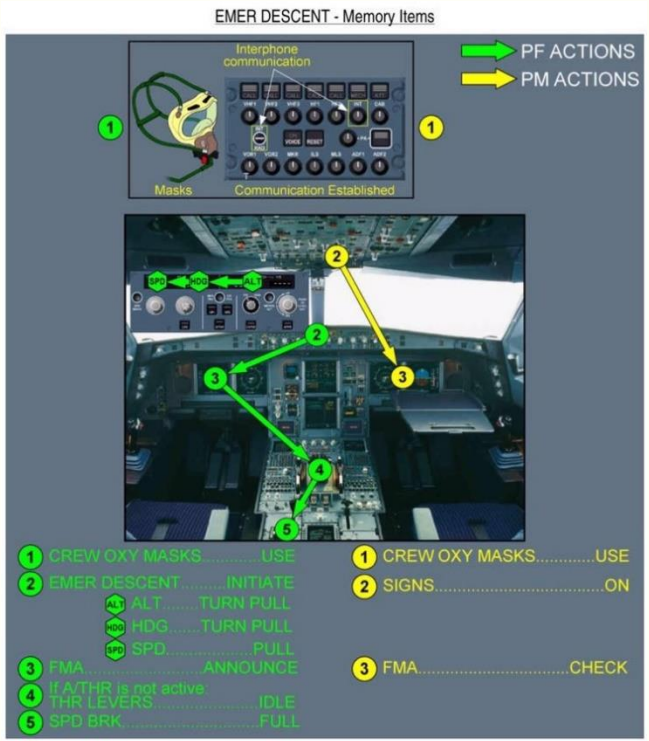
烟雾/有毒气体排出
REMOVAL OF SMOKE/FUMES

Depressurization & Smoke

释压
Depressurization

- 很重要
- Very important

- 成熟的程序
- Mature procedure



Depressurization & Smoke

释压
Depressurization

训练要素：
Key point for training :

- 准确和迅速而不是慌乱
- Rapidly & Exactly without hurry and confusion

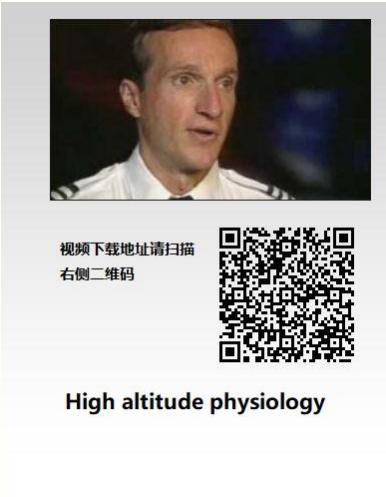
- 超出预期的生理反应和操作环境
- Unpredictable physiologic symptoms & oprating situations

程序的熟练程度对于成熟飞行员早已不是障碍，如何消除模拟机上容易被懈怠的紧迫感？
Proficiency of the procedure for mature pilots is no longer difficult, how to eliminate the relax sense of urgency during simulator training?

Depressurization & Smoke

释压
Depressurization

风险点：
Risk point：



缺氧及释压条件下的生理反应
Physiologic symptoms under hypoxia and Depressurization

意识
Consciousness
1-2 min.@ 25000ft
15-20 sec.@40000ft

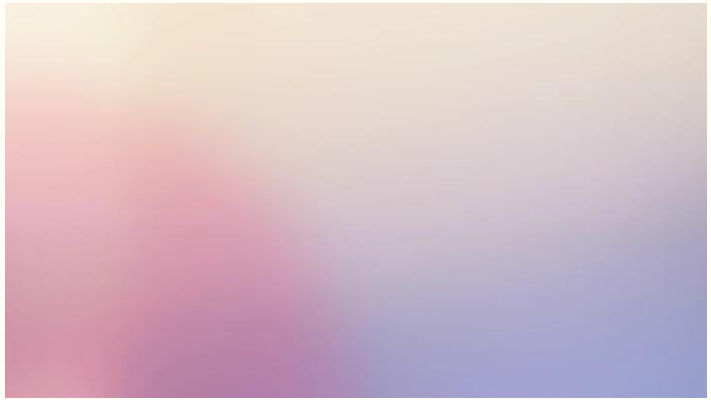
身体
Body
像打开的易拉罐
Just like opening a pop-top can

Depressurization & Smoke

释压
Depressurization

娱乐时间：
Show time：

8.0 PSI.....



Depressurization & Smoke

释压
Depressurization

风险点：
Risk point：

释压状态下还有什么事情会发生？
Anything else should be happened?

恐怖的低温
Horrible cold
SAT -40℃

吵闹的驾驶舱或客舱
Noisy CKPT or CAB
Structural damage

Depressurization & Smoke

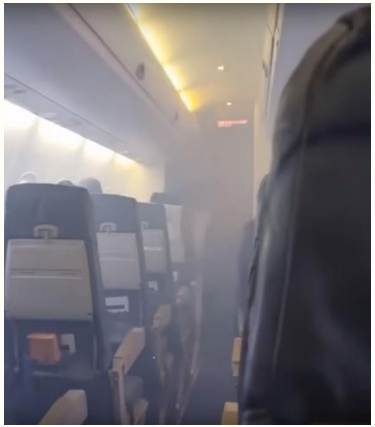
烟雾
Smoke

- 诱因：复杂
- Triggering Conditions：Multiple
- 程序：或门太多
- Procedure：Too much disjunction gate
- 风险：窒息
- Risk：Asphyxia

Depressurization & Smoke

烟雾
Smoke

典型类别
Typical categories



有警告且可隔离的货舱烟雾警告
Cargo smoke with warning and could be isolated

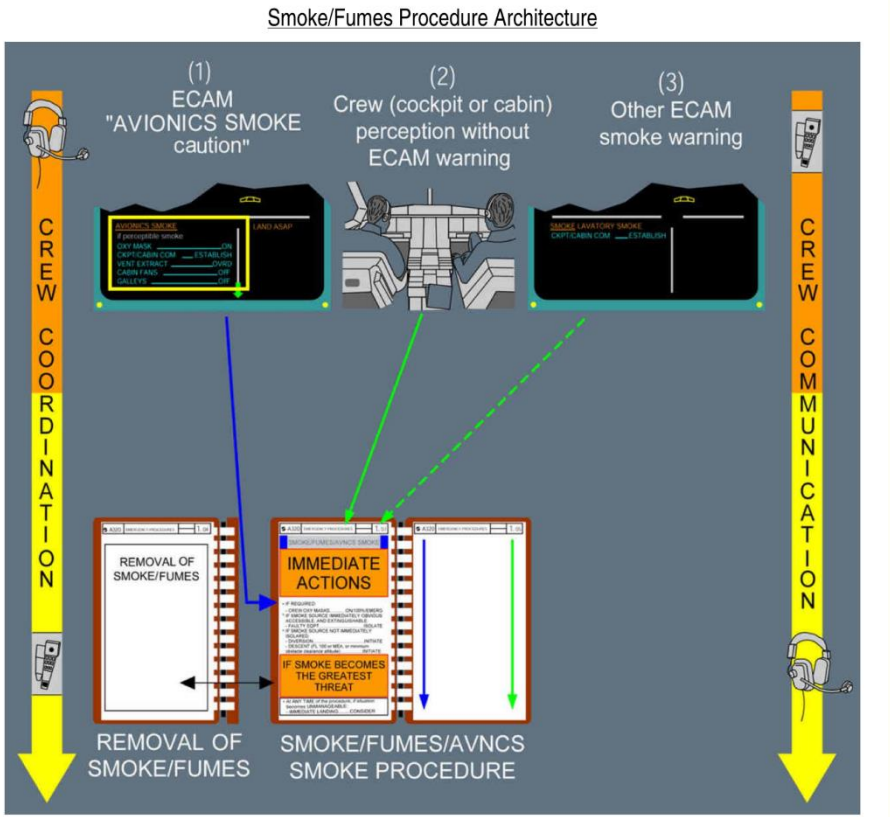
经由电子舱进入驾驶舱的有毒气体
Fumes from AVIONICS into CKPT

组件或起火冒烟污染客舱、驾驶舱的烟雾或有毒气体
Smoke or fumes plant by packs or fire in CAB or CKPT

Depressurization & Smoke

烟雾
Smoke

- FCTM中的描述
- Description by FCTM



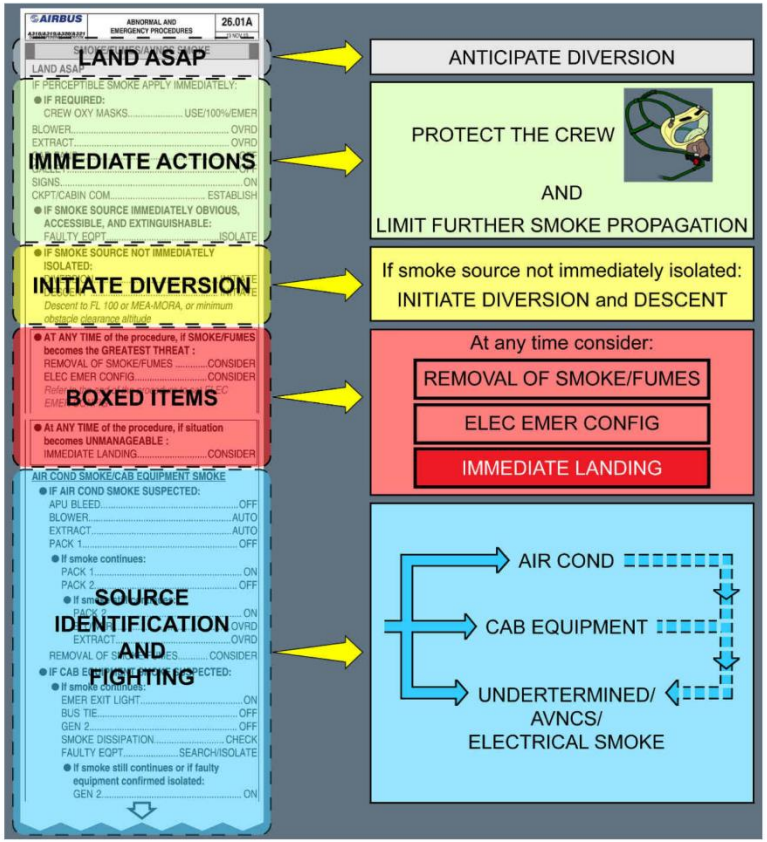
Depressurization & Smoke

烟雾
Smoke

- 策略
- Strategies

- 等级
- Category

SMOKE/FUMES/AVNCS SMOKE Procedure Presentation in QRH



Depressurization & Smoke

烟雾
Smoke

REMOVAL OF SMOKE / FUMES

EMER EXIT LIGHT..... ON

■ **If fuel vapors:**
- CAB FANS.....ON
- PACK 1..... OFF
- PACK 2..... OFF

■ **If no fuel vapors:**
- CAB FANS..... OFF
- PACK FLOW..... HI

LDG ELEV.....10 000 FT / MEA-MORA

DESCENT TO FL 100 / MEA-MORA..... INITIATE

ATC..... NOTIFY

SMOKE / FUMES / AVNCS SMOKE PROC.....CONTINUE

Refer to ABN-27 Smoke / Fumes / AVNCS Smoke - General

● **At FL 100 or MEA-MORA:**

烟雾和排烟
Smoke & Removal

CKPT / CAB COM.....ESTABLISH

● **If smoke source immediately obvious, accessible, and extinguishable:**

FAULTY EQPT.....ISOLATE

● **If smoke source not immediately isolated:**

DIVERSION..... INITIATE

DESCENT TO FL 100 / MEA -MORA..... INITIATE

● **At ANY TIME of the procedure, if SMOKE / FUMES becomes the GREATEST THREAT :**

REMOVAL OF SMOKE / FUMES..... CONSIDER

Refer to ABN-27 Removal of Smoke / Fumes

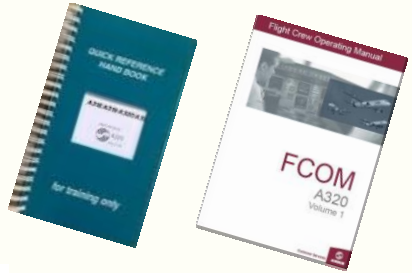
ELEC EMER CONFIG.....CONSIDER

Refer to the end of the procedure to set ELEC EMER CONFIG.

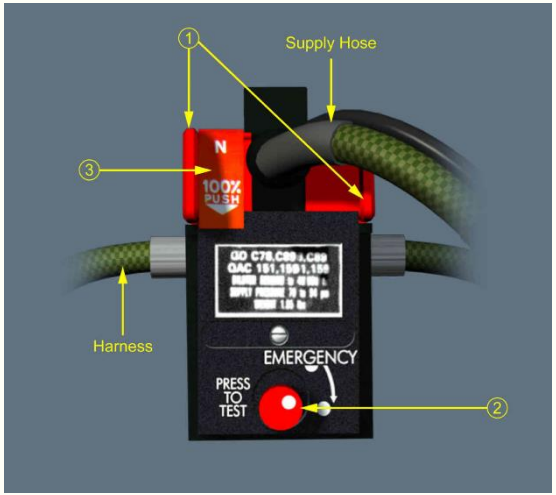
● **At ANY TIME of the procedure, if situation becomes UNMANAGEABLE :**

IMMEDIATE LANDING.....CONSIDER

Depressurization & Smoke



烟雾
Smoke



海南航空股份有限公司
HAINAN AIRLINES COMPANY LIMITED

A318/A319/A320/A321
FLIGHT CREW
OPERATING MANUAL

PROCEDURES
ABNORMAL AND EMERGENCY PROCEDURES
SMOKE

[QRH] SMOKE / FUMES / AVNCS SMOKE (Cont'd)

If smoke is confirmed, the following procedure must be applied.

OXY MASK / GOGGLE (if required).....USE/100%/EMERG

Ensure crew communication is established. Avoid continuous use of the interphone to minimize interference from the oxygen mask breathing noise.

Turn the emergency knob to remove condensation or smoke from the mask.

VENTILATION BLOWER..... OVRD
VENTILATION EXTRACT..... OVRD

Avionics ventilation air is extracted overboard.

CAB FANS.....OFF

To prevent smoke from entering the cockpit and cabin.

GALY & CAB.....OFF
SIGNS.....ON
CKPT / CABIN COM..... ESTABLISH

Communication must be established with the cabin crew in order to follow up on the smoke origin and dissipation.

● **If smoke source immediately obvious, accessible, and extinguishable:**
FAULTY EQPT..... ISOLATE

地面实测EMER位，一个氧气面罩正压供氧时压力大约以20PSI/10sec下降，温馨提示诸位小主慎用

EMER OVERPRESSURE SEL 即便不在EMER位，当CAB ALT超过30000ft时会自动OVERPRESSURE供氧

桂林航空
Air Guilin

SOP-Standard Operating Procedures

SOP概念

理念

设备

布局

桂林航空
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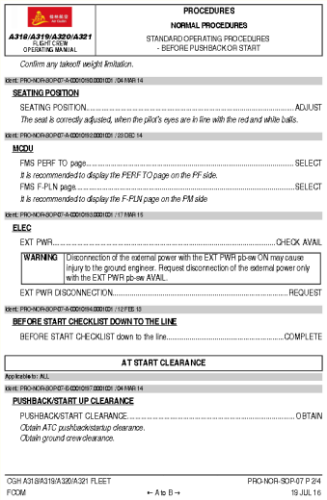
SOP-Standard Operating Procedures

FCOM PROCEDURE



PROCEDURES
NORMAL PROCEDURES
STANDARD OPERATING PROCEDURES - BEFORE PUSHBACK OR START

Confirm any takeoff weight limitation.

SEATING POSITION

SEATING POSITION ..... ADJUST
The seat is correctly adjusted, when the pilot's eyes are in line with the red and white balls.

MCDU

FMS PERF TO page ..... SELECT
It is recommended to display the PERF TO page on the PF side.
FMS F-PLN page ..... SELECT
It is recommended to display the F-PLN page on the PM side

ELEC

EXT PWR ..... CHECK AVAIL

WARNING: Disconnection of the external power with the EXT PWR pb-sw ON may cause injury to the ground engineer. Request disconnection of the external power only with the EXT PWR AVAIL.

EXT PWR DISCONNECTION ..... REQUEST

BEFORE START CHECKLIST DOWN TO THE LINE

BEFORE START CHECKLIST down to the line ..... COMPLETE

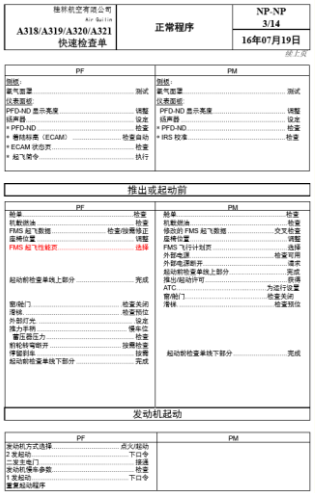
AT START CLEARANCE

Applicable to: ALL

PUSHBACK/START UP CLEARANCE

PUSHBACK/START CLEARANCE ..... OBTAIN
Obtain ATC pushback/startup clearance.
Obtain ground crew clearance.

QRH PROCEDURE



A318/A319/A320/A321
快速检查单

正常程序

NP.NP
3/14
16年07月19日

PF	PM
驾驶舱	驾驶舱
氧气面罩 ..... 测试	氧气面罩 ..... 测试
仪表面板:	仪表面板:
PFD-ND 显示亮度 ..... 调整	PFD-ND 显示亮度 ..... 调整
结果键 ..... 设定	结果键 ..... 设定
+ PFD-ND ..... 检查	+ PFD-ND ..... 检查
+ 警戒和告 (ECAM) ..... 检查自动	+ IRS 校准 ..... 检查
+ ECAM 状态页 ..... 检查	
+ 起飞简令 ..... 执行	

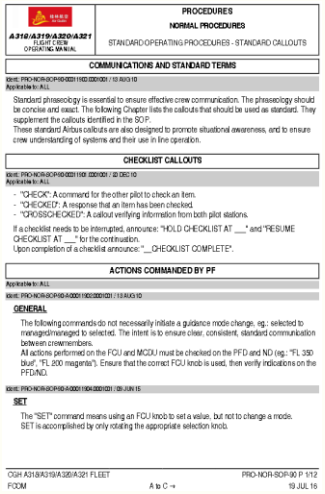
推出或起动前

PF	PM
舱单 ..... 检查	舱单 ..... 检查
机载燃油 ..... 检查	机载燃油 ..... 检查
FMS 起飞数据 ..... 检查按需修正	修改的 FMS 起飞数据 ..... 交叉检查
座椅位置 ..... 调整	座椅位置 ..... 调整
FMS 起飞性能页 ..... 选择	FMS 飞行计划页 ..... 选择
	外部电源 ..... 检查可用
	外部电源断开 ..... 请求
起动前检查单线上部分 ..... 完成	起动前检查单线上部分 ..... 完成
	推出/起动许可 ..... 获得
	ATC ..... 为进行设置
舱门 ..... 检查关闭	舱门 ..... 检查关闭
滑梯 ..... 检查预位	滑梯 ..... 检查预位
外部灯光 ..... 设定	
地方资讯 ..... 输单位	
客舱压力 ..... 检查	
前轮转弯助开 ..... 按需检查	
停留刹车 ..... 按需	
起动前检查单线下部分 ..... 完成	起动前检查单线下部分 ..... 完成

发动机起动

PF	PM
发动机开关选择 ..... 点火/起动	
2 发起动 ..... 下拉令	
二发去电门 ..... 接通	
发动机慢车参数 ..... 检查	
1 发起动 ..... 下拉令	
重复起动程序	

STANDARD CALLOUTS



PROCEDURES
NORMAL PROCEDURES
STANDARD OPERATING PROCEDURES - STANDARD CALLOUTS

COMMUNICATIONS AND STANDARD TERMS

Applicable to: ALL

Standard phraseology is essential to ensure effective crew communication. The phraseology should be concise and exact. The following Chapter lists the callouts that should be used as standard. They supplement the callouts identified in the SOP.
These standard Airbus callouts are also designed to promote situational awareness, and to ensure crew understanding of systems and their use in line operation.

CHECKLIST CALLOUTS

Applicable to: ALL

- "CHECK": A command for the other pilot to check an item.
- "CHECKED": A response that an item has been checked.
- "CROSSCHECKED": A callout verifying information from both pilot stations.

If a checklist needs to be interrupted, announce: "HOLD CHECKLIST AT ___" and "RESUME CHECKLIST AT ___" for the continuation.
Upon completion of a checklist announce: "__CHECKLIST COMPLETE".

ACTIONS COMMANDED BY PF

Applicable to: ALL

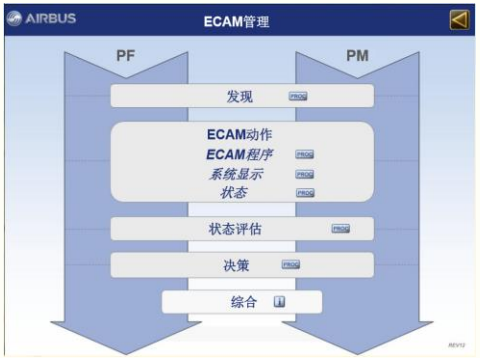
GENERAL

The following commands do not necessarily initiate a guidance mode change, eg.: selected to managed/managed to selected. The intent is to ensure clear, consistent, standard communication between crewmembers.
All actions performed on the FCU and MCDU must be checked on the PFD and ND (eg.: "FL 350 blue", "FL 200 magenta"). Ensure that the correct FCU knob is used, then verify indications on the PFD/ND.

SET

The "SET" command means using an FCU knob to set a value, but not to change a mode.
SET is accomplished by only rotating the appropriate selection knob.

ECAM MANAGEMENT



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SOP-Standard Operating Procedures

情景触发程序 vs 事件遇上经验

探讨

- 丰富的飞行经验是否可以让飞行员有更完整的情景预判
- 即便是有较完整的风险源数据库，被过度依赖的经验，是否会造成选择性执行SOP的行为
- 经验能不能每次都触发机组正确的处置
- 事件去触发一个程序的标题风险是否会更低

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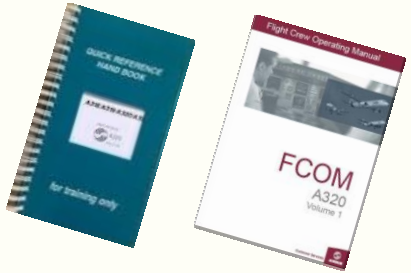
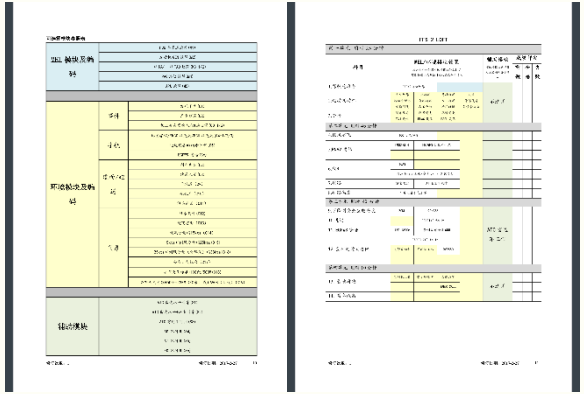


SOP-Standard Operating Procedures

SOP训练



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谢谢

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