Preliminary Report on the Serious Incident involving an Embraer 145LR aircraft operated by Rano Air Limited with nationality and registration marks 5N-BZY, which occurred en route to Saddiq Abubakar III International Airport (DNSO), Sokoto State, on 29 June 2025

Operator:	Rano Air Limited
Aircraft type and model:	Embraer 145LR
Manufacturer:	Embraer, Brazil
Year of manufacture:	2002
Nationality and registration marks:	5N-BZY
Serial number:	145628
Location:	En route Saddiq Abubakar International Airport, Sokoto State
Date and Time:	29 June 2025 at about 15:33 h (*All times in this report are local time, equivalent to UTC+1 unless otherwise stated)*

INTRODUCTION

The Nigerian Safety Investigation Bureau (NSIB) was notified of the incident by the operator on June 29, 2025. Investigators were dispatched to Sokoto the next day. Post-occurrence assessments commenced under the provisions of Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 2023 and Annex 13 to the Convention on International Civil Aviation.

This Preliminary Report outlines the initial facts, discussions, and findings related to the incident. It includes information gathered from witness statements, the ATC transcript, and a preliminary inspection of the aircraft.

The report presents the current status of the notification's processing. Its content may still change and does not necessarily bind the conclusions published in the investigation's Final Report.

The investigation is ongoing.

1.0 FACTUAL INFORMATION

1.1 History of the flight

On 29 June 2025, an Embraer 145LR aircraft, operated by Rano Air Limited with nationality and registration marks 5N-BZY, was scheduled to conduct a passenger flight from Nnamdi Azikiwe International Airport (DNAA), Abuja, to Sir Abubakar Siddiq International Airport (DNSO), Sokoto as RAN2024. The aircraft had earlier completed four flight sectors: Abuja-Kano, Kano-Lagos, Lagos-Kano, and Kano-Abuja, all of which were uneventful.

At 14:35 h, RAN2024 departed DNAA on an Instrument Flight Rules (IFR) flight plan with 55 persons onboard, including 2 flight crew and 2 cabin crew members, with fuel endurance of three hours 24 minutes. The Captain was the Pilot Flying (PF), while the First Officer was the Pilot Monitoring (PM). RAN2024 was cleared to climb and cruise at FL260.

At 14:53:20 h, RAN2024 contacted Kano ACC, and at 14:55:31 h, RAN2024 was cleared to 'SOK' FL260 expect no delay for VOR/DME approach RWY 26 QNH1012 contact time 13:56 standby full met report. Full met report 13:00, wind reported 310/14kt, visibility 10km in nil weather, cloud few at height of 390ft, QNH1012, temperature 33, dew point 20 degrees Charlie. At 14:55:31 h, no objection report released by Kano

At 14:56:20 h, RAN2024 established contact with Sokoto ATC and reported "Persons on board 51 plus 4 crew, endurance three hours from DNAA to DNSO maintaining FL260, estimate 14:30". ATC cleared RAN2024 "SOK FL260 expect no delay for VOR/DME approach runway 26 QNH1012 contact time is 13:56 standby full met. Report".

While cruising at FL260, the flight crew observed a rising oil temperature on Engine Number 1, with indications entering the amber range, accompanied by a decrease in oil pressure.

The crew decided to reduce thrust on the affected engine (engine number 1) to monitor for any improvement, but the temperature and pressure readings continued to fluctuate. The flight crew then executed the Quick Reference Handbook (QRH) for high oil temperature.

At 15:05 h, while at a distance of 100 nm from DNSO on radial 153, maintaining FL260, RAN2024 declared an emergency to Sokoto ATC. Upon the ATC's request for the nature of the emergency, RAN2024 reported smoke from engine number 1. RAN2024 was then asked for their intention. The Flight Crew requested descent, which was granted, and coordination was established with Kano Area Control Centre (ACC) for descent at the Pilot's discretion. While descending through FL250, the crew executed QRH for EMERGENCY/ABNORMAL PROCEDURES (Smoke Evacuation).

According to the Purser, smoke in the cabin was reported by a crew member seated at L2 when a callout was made: "Halon to the aft." The Purser proceeded to the aft section, observed smoke emanating from the cabin floor near seats 24A and 24D, and immediately informed the Captain. The Captain acknowledged the situation, reported that there was also smoke in the cockpit.

The Flight Crew donned their Oxygen Masks. The Cabin Crew also donned their Protective Breathing Equipment (PBE), retrieved a fire extinguisher, and proceeded to the aft section. The Purser confirmed the absence of fire within and outside the lavatory. He also observed the cargo hold through a peephole in the lavatory and found no visible signs of fire. These observations were reported to the Captain. The Captain then informed the Purser that the smoke was originating from Engine number 1 and the aircraft was already in rapid descent. The Cabin Crew reassured passengers of their safety as there was growing panic in the cabin.

During the descent, the flight crew observed indications of Engine number 1 failure.

The Purser contacted the flight crew and reported that the smoke in the cabin had dissipated.

At about 15:14 h, Airport Rescue and Fire Fighting Services (ARFFS) were notified, and three fire service trucks and an ambulance were stationed at strategic locations.

At about 15:26 h, Kano ACC reported loss of radar contact with RAN2024 and requested DATCO to maintain the telephone line to enable continuous monitoring of the situation.

At about 15:27 h, RAN2024 reported 25 nm to Sokoto and was maintaining FL80.

At about 15:28 h, RAN2024 was instructed to continue descent to 3,500ft and cleared for approach to Runway 26.

At about 15:29 h, RAN2024 reported 19 nm.

At about 15:31 h, RAN2024 reported 10 nm and was cleared to land Runway 26, surface wind 320/14kt.

At about 15:35 h, RAN2024 landed DNSO safely, with engine number 1 inoperative.

After landing, the Captain requested ATC to visually inspect the engine area for signs of fire before initiating passenger disembarkation. ATC reported there was no fire.

All persons on board disembarked safely without injuries.

The incident occurred en route to Sokoto at 15:03:55 h, Meteorological conditions prevailed.

1.2 Injuries to persons

Injuries	Crew	Passengers	Total in the aircraft	Others
Fatal	Nil	Nil	Nil	Nil
Serious	Nil	Nil	Nil	Nil
Minor	Nil	Nil	Nil	Nil
None	4	51	55	Nil
TOTAL	4	51	55	Nil

1.3 Damage to aircraft

The aircraft sustained no damage.

1.4 Other damage

Nil

1.5 Personnel information

1.5.1 Captain

Nationality:	Nigerian
Age:	44
License type:	Airline Transport Pilot License (Aeroplane)
License:	Valid till 17 September, 2028
Aircraft ratings:	EMB-135/145
Medical certificate:	Valid till 17 February, 2026
Instrument rating:	Valid till 14 February 2026
Proficiency check:	Valid till 17 August, 2025
Total flying time:	5242:55 h
Total on type:	4858:30 h
Total on type (PIC):	1640 h
Last 90 days:	262:25 h
Last 28 days:	71:40 h
Last 24 hours:	00:58 h

1.5.2 First officer

Nationality:	Nigerian
Age:	29
License type:	Commercial Pilot License (Aeroplane)

License:	Valid till 4 April, 2028
Aircraft ratings:	EMB-135/145LR
Medical certificate:	Valid till 3 January, 2026
Instrument rating:	Valid till 16 April 2026
Proficiency check:	Valid till 16 October, 2025
Total flying time:	700 h
Total on type:	511 h
Last 90 days:	132 h
Last 28 days:	36 h
Last 24 hours:	00:58 h

1.5.3 Purser

Nationality:	Nigerian
Age:	44
Licence type:	Cabin Crew Licence
Licence:	Valid till 23 July 2027
Aircraft ratings:	EMB-135/145 A340-600 B737-300/500 B747-200 B747-300/400
Medical certificate:	Valid till 29 August 2025
Emergency Drills:	Valid till 21 August, 2025
	Evacuation (EMB.135/145) Fire Drill, Ditching

1.5.3 Engineer 1

Nationality:	Nigerian
Age:	36
Licence type:	Aircraft Maintenance Engineer's Licence
Licence validity:	Valid till 14 October 2026
Aircraft type ratings:	TB-9 EMB-135/145 LEGACY/600/650

1.5.4 Engineer 2

Nationality:	Nigerian
Age:	31
Licence type:	Aircraft Maintenance Engineer's Licence
Licence validity:	Valid till 2nd January, 2029
Aircraft type ratings:	EMB-135/145LR LEGACY 600/650

1.6 Aircraft information

1.6.1 General information

Type:	Embraer EMB-145LR
Manufacturer:	Embraer, Brazil
Year of manufacture:	2002
Serial number:	145628
Certificate of Airworthiness:	Valid till 12 March, 2026

Certificate of insurance:	Valid till 30 September 2025
Certificate of Registration:	Issued 7 March 2022
Total airframe time:	40284:31 h
Total landing cycles:	32363

During a post-occurrence interview, the maintenance engineer who worked on the aircraft after the occurrence stated that a large oil leak was discovered on the center scavenge oil sump transfer to the fairing core oil tube diffuser fittings. The engineer conducted a cleaning of the engine area and then cranked the engine without ignition (motoring), during which another oil leak was observed.

The engineer stated that the source of the smoke was determined to be oil entering the bypass duct, where fan air flows to the pre-cooler and mixes with bleed air from the engine that supplies air to the Environmental Control System (ECS).

1.6.2 Engines

Engine	**Number 1**	**Number 2**
Manufacturer	Rolls-Royce, UK	Rolls-Royce, UK
Type/Model	AE 3007AIP	AE3007AIP
Serial number	CAE312181	CAE311995
Time Since New	35388:2	37164
Cycles Since New	30371	32515

Fuel Used: Jet A1

Figure 1: 5N-BZY after the occurrence.

1.7 Meteorological information

DNSO	**1200Z**	**1300Z**	**1400Z**	**1500Z**
Wind:	310/12	310/09	320/14	300/05
Visibility:	9999	9999	CAVOK	CAVOK
Weather:	FEW012	FEW013	Nil	Nil
Cloud:	FEW021CB	Nil	Nil	Nil

Temp/Dew:	31/21	33/20	34/20	34/20
QNH:	1013	1012	1011	1010

1.8 Aids to navigation

The status of the navigational aids at Abubakar Siddiq International Airport, Sokoto, on the day of the occurrence was as follows:

"SOK" VOR/DME	113.9 MHz	- 'Serviceable'
"ISK" ILS/DME	109.5 MHz	- 'Serviceable'
ADB Beacon / Binocular		- 'Serviceable'
Wind Direction Indicator/ SATCOM link		- 'Serviceable'
ALDIS Lamp		- 'Serviceable'
Tel lines / CWG Phones		- 'Serviceable'
Digital Clock / MET PC		- 'Serviceable'
Wind Speed Indicator/ AIS Automation		- 'Unserviceable'

1.9 Communication

There was effective communication between the Air Traffic Controllers at both Abuja and Sokoto airports with 5N-BZY.

The status of the communication at Abubakar Siddiq International Airport, Sokoto, on the day of the occurrence was as follows:

VHF 122.1 MHz Tower Primary Frequency	- 'Serviceable'
VHF 124.5 MHZ Tower Secondary Frequency	- 'Serviceable'
VHF 121.7 MHZ Domestic Frequency	- 'Serviceable'

VHF Intercom Transceiver - 'Serviceable'

1.10 Aerodrome information

Saddiq Abubakar III International Airport, Sokoto (DNSO) was equipped with a runway designation of 26/08 with an asphalt surface. The length and width of the runway are 3000 meters and 60 meters, respectively. The runway reference point is 125457.2274N 0051224.8324E and an elevation of 308 m (1,010 ft). The aerodrome is located 7km from Sokoto City, Sokoto State.

1.11 Flight recorders

The aircraft is fitted with a solid-state Flight Data Recorder (FDR) and a Cockpit Voice Recorder (CVR) with the following particulars:

Recorders	**Flight Data Recorder**	**Cockpit Voice Recorder**
Manufacturer	Honeywell, USA	Honeywell, USA
Model	SSFDR	SSCVR
Part Number	980-4700 042	980-6022-011
Serial Number	8873	1625

The FDR and CVR were retrieved. The FDR was downloaded at the Transportation Safety Laboratory of the Nigerian Safety Investigation Bureau (NSIB), Abuja, Nigeria. The CVR was found to be overwritten.

1.12 Wreckage and impact information

Not Applicable

1.13 Medical and pathological information

Nil

1.14 Fire

There was no fire.

1.15 Survival aspect

Not applicable.

1.16 Test and Research

Nil

1.17 Organization and management information

1.17.1 Rano Air Limited

Rano Air Limited is a Nigerian airline established in 2019 and operates under the oversight of the Nigeria Civil Aviation Authority (NCAA). Rano Air's operations are subject to the provisions of the Nigerian Civil Aviation Regulations (Nig. CARs), and the airline is

required to maintain compliance with applicable safety, maintenance, and crew training standards as prescribed by the NCAA and ICAO Annexes.

The airline holds the required approvals to conduct scheduled and non-scheduled flight operations in Nigeria. It maintains its principal base of operations at Nnamdi Azikiwe International Airport, Abuja.

The company operates a fleet of five Embraer ERJ-145LR aircrafts configured for short- to medium-haul routes. As of the date of the occurrence, the airline provided regular services to several Nigerian destinations, including Abuja, Kano, Lagos, Kaduna, Katsina, Bauchi, Maiduguri, Sokoto, and Osubi.

1.17.2 Nigeria Civil Aviation Authority (NCAA)

NCAA is the government agency saddled with the regulation and oversight of aviation activities in Nigeria. The NCAA was established by the Nigerian Civil Aviation Act (2022) which enables the Director-General of NCAA to make regulations in aviation. The current regulations are as enshrined in the Nigeria Civil Aviation Regulations (Nig. CARs) 2023. Relevant sections of the Nig. CARs guide activities of personnel and service providers in the aviation industry. Oversight activities are achieved by continuous and periodic audits by inspectors of the NCAA.

2.0 FINDINGS

1. The flight crew held a valid licence and were qualified to conduct the flight.
2. The aircraft had a valid Certificate of Airworthiness.
3. While cruising at FL260, the flight crew observed a rising oil temperature and low pressure on Engine number 1 indications.
4. The flight crew donned oxygen masks.
5. The cabin crew donned their Protective Breathing Equipment (PBE) and retrieved a fire extinguisher.
6. The Captain informed the Purser that smoke was originating from Engine number 1.
7. The flight crew declared an emergency.
8. The Purser informed the Flight Crew that the smoke in the cabin had dissipated.
9. The Aircraft landed DNSO safely at about 15:35 h, with engine number 1 inoperative.
10. The Captain requested ATC to inspect for signs of fire before initiating passenger disembarkation.
11. Aerodrome Rescue and Fire Fighting Services (ARFFS) were on standby after notification.
12. The Crew and passengers disembarked safely, without injuries.
13. The FDR and CVR were retrieved.
14. The FDR was downloaded at the Transport Safety Laboratory of the Nigerian Safety Investigation Bureau.
15. The CVR was found to be overwritten.

3.0 IMMEDIATE SAFETY RECOMMENDATION

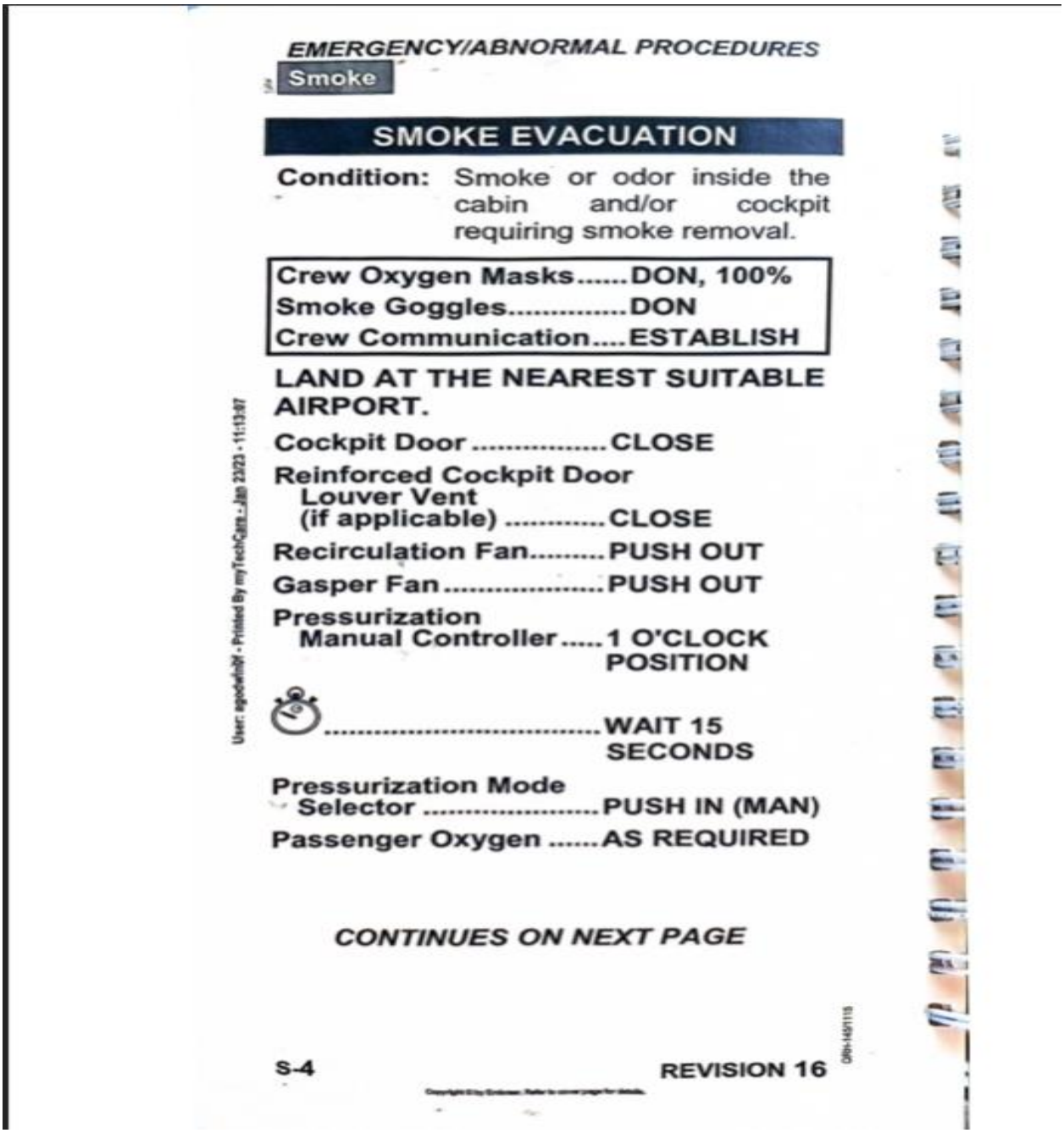
3.1 Safety Recommendation 2025-003

Nigeria Civil Aviation Authority should invoke part 7 sections 8.1.3 (b) of Nig. Cars, in accordance with legal enforcement action, non-compliant operators with the All Operators Letter (AOL) (NCAA/FSG/AOL/19/03) on continuous overwriting of cockpit voice recorder (CVR) information.

Further Investigation

The Aircraft engine has been prepared for onward shipping for further examination at the OGMA facility in Portugal.

Appendix: Quick Reference Handbook (QRH)



EMERGENCY/ABNORMAL PROCEDURES

Smoke

SMOKE EVACUATION

Condition: Smoke or odor inside the cabin and/or cockpit requiring smoke removal.

Crew Oxygen Masks	DON, 100%
Smoke Goggles	DON
Crew Communication	ESTABLISH

LAND AT THE NEAREST SUITABLE AIRPORT.

Cockpit Door	CLOSE
Reinforced Cockpit Door Louver Vent (if applicable)	CLOSE
Recirculation Fan	PUSH OUT
Gasper Fan	PUSH OUT
Pressurization Manual Controller	1 O'CLOCK POSITION
	WAIT 15 SECONDS
Pressurization Mode Selector	PUSH IN (MAN)
Passenger Oxygen	AS REQUIRED

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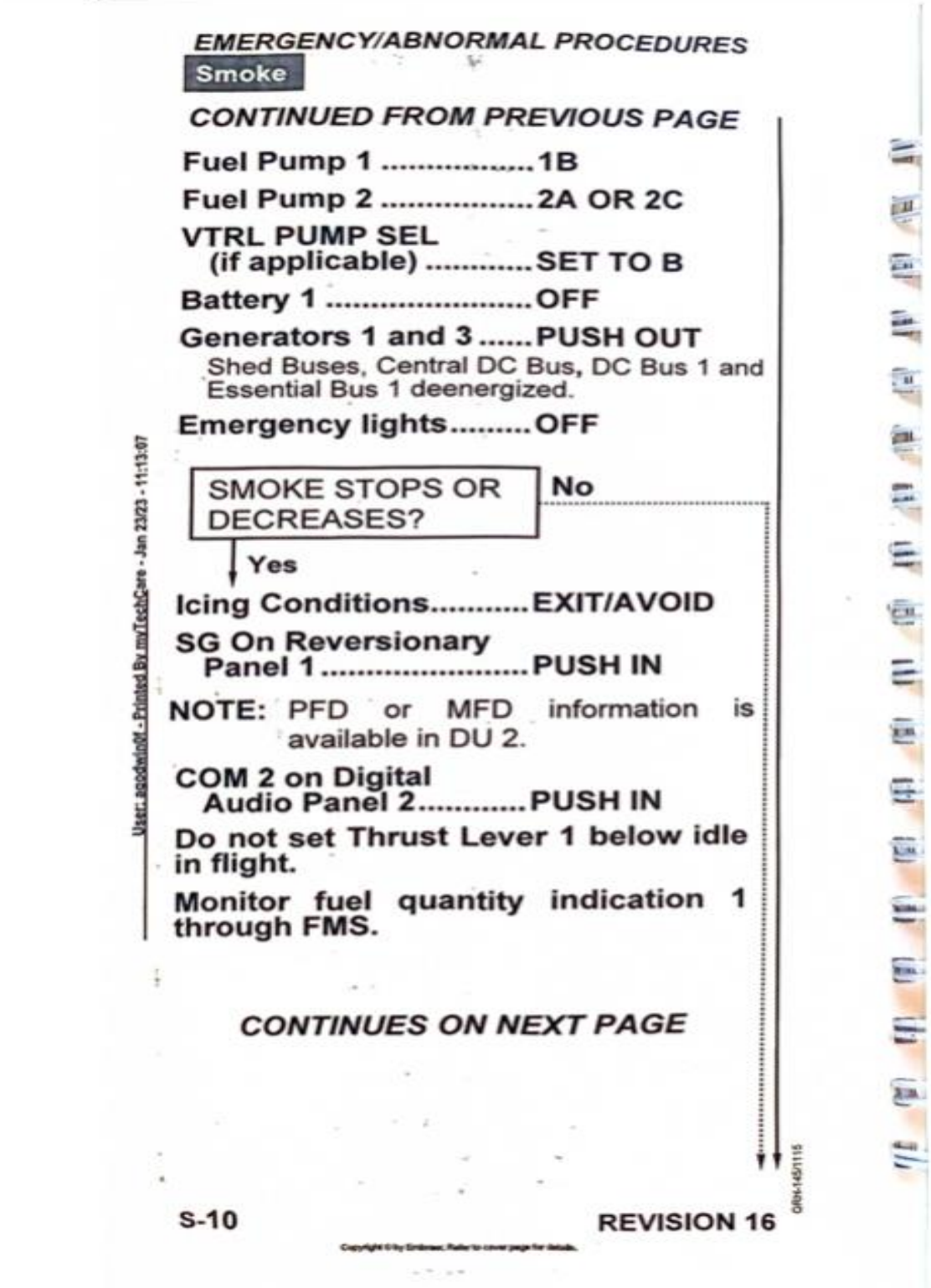

EMERGENCY/ABNORMAL PROCEDURES

Smoke

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Fuel Pump 1 ..... 1B

Fuel Pump 2 ..... 2A OR 2C

VTRL PUMP SEL
(if applicable) ..... SET TO B

Battery 1 ..... OFF

Generators 1 and 3 ..... PUSH OUT
Shed Buses, Central DC Bus, DC Bus 1 and Essential Bus 1 deenergized.

Emergency lights ..... OFF

SMOKE STOPS OR DECREASES? — No

Yes

Icing Conditions ..... EXIT/AVOID

SG On Reversionary
Panel 1 ..... PUSH IN

NOTE: PFD or MFD information is available in DU 2.

COM 2 on Digital
Audio Panel 2 ..... PUSH IN

Do not set Thrust Lever 1 below idle in flight.

Monitor fuel quantity indication 1 through FMS.

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EMERGENCY/ABNORMAL PROCEDURES

Non Annunciated

ENGINE HIGH OIL PRESSURE

EICAS Indication: Oil pressure pointer in amber range

OIL TEMPERATURE, OIL LEVEL OR ENGINE VIBRATION OUT OF LIMITS? — No

Yes

Associated Procedure ..... **ACCOMPLISH**

END

ENGINE HIGH OIL TEMPERATURE

EICAS Indication: Oil temperature pointer and digits become red.

Associated Thrust Lever ..... **REDUCE**

FAILURE PERSISTS? — No

Yes

ABOVE 25'000 FT? — No

Yes

Altitude ..... **MAX 25'000 FT**
MINIMUM MEA

FAILURE PERSISTS? — No

Yes

Affected ENGINE FAILURE/SHUTDOWN Procedure (NAP-19) ..... **ACCOMPLISH**

END

ENGINE LOW OIL LEVEL

MFD Indication: Oil quantity enters amber range.

Affected ENGINE FAILURE/SHUTDOWN Procedure (NAP-19) ..... **AS REQUIRED**

- Consider shutting the engine down to preserve oil quantity, and if required restart it prior to landing.

NOTE: The indication of oil-level is accurate above 3 quarts.

END

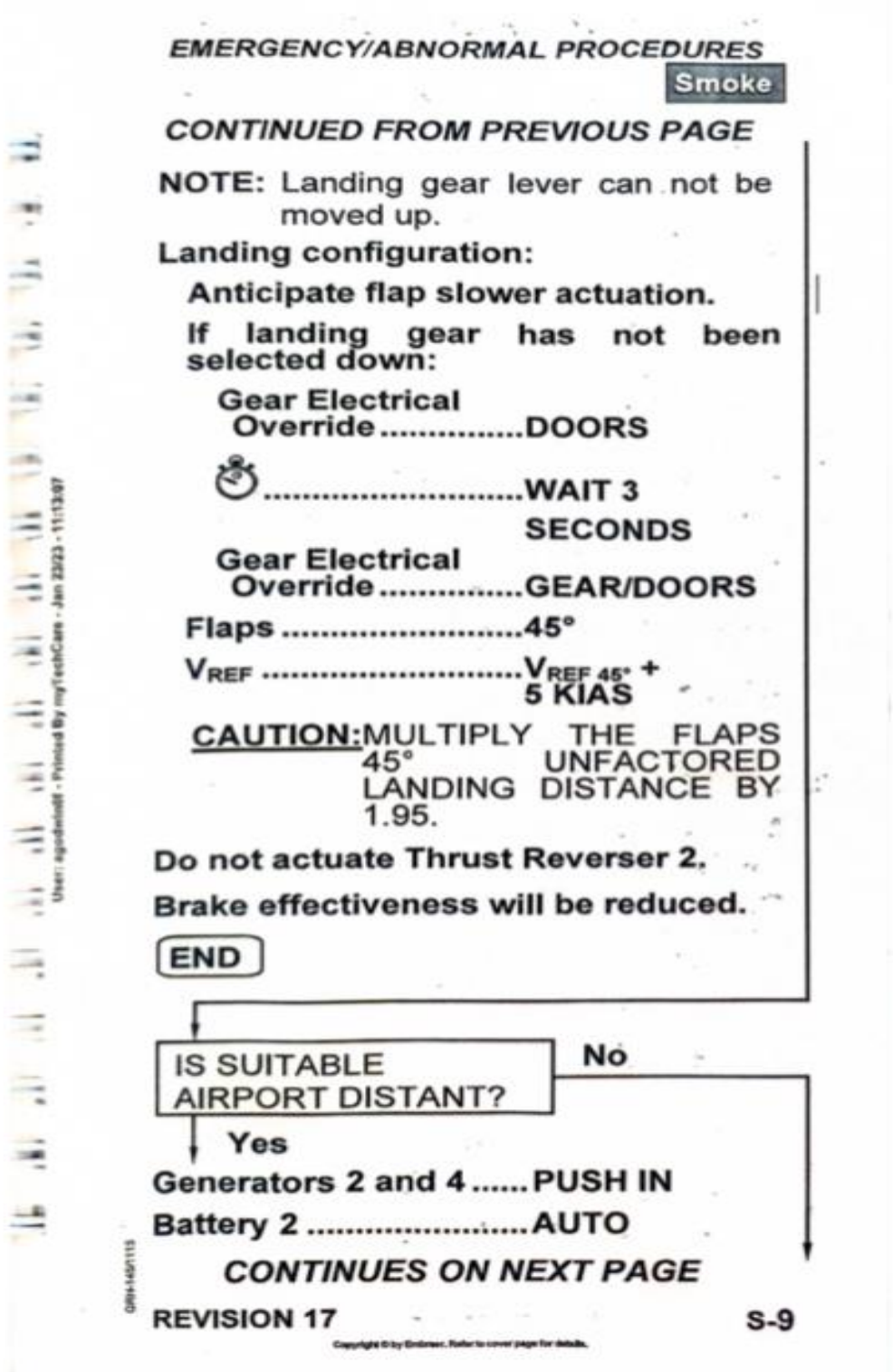
ENGINE OIL LOW PRESSURE

EICAS Indication: Oil pressure in amber range.

Associated Thrust Lever ..... **REDUCE**

Reduce N2 below 88%.

END



EMERGENCY/ABNORMAL PROCEDURES

Smoke

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NOTE: Landing gear lever can not be moved up.

Landing configuration:

Anticipate flap slower actuation.

If landing gear has not been selected down:

Gear Electrical Override .....DOORS

.....WAIT 3 SECONDS

Gear Electrical Override .....GEAR/DOORS

Flaps .....45°

V_{REF} .....$V_{REF\ 45°}$ + 5 KIAS

CAUTION: MULTIPLY THE FLAPS 45° UNFACTORED LANDING DISTANCE BY 1.95.

Do not actuate Thrust Reverser 2.

Brake effectiveness will be reduced.

END

IS SUITABLE AIRPORT DISTANT? **No**

Yes

Generators 2 and 4 .....PUSH IN

Battery 2 .....AUTO

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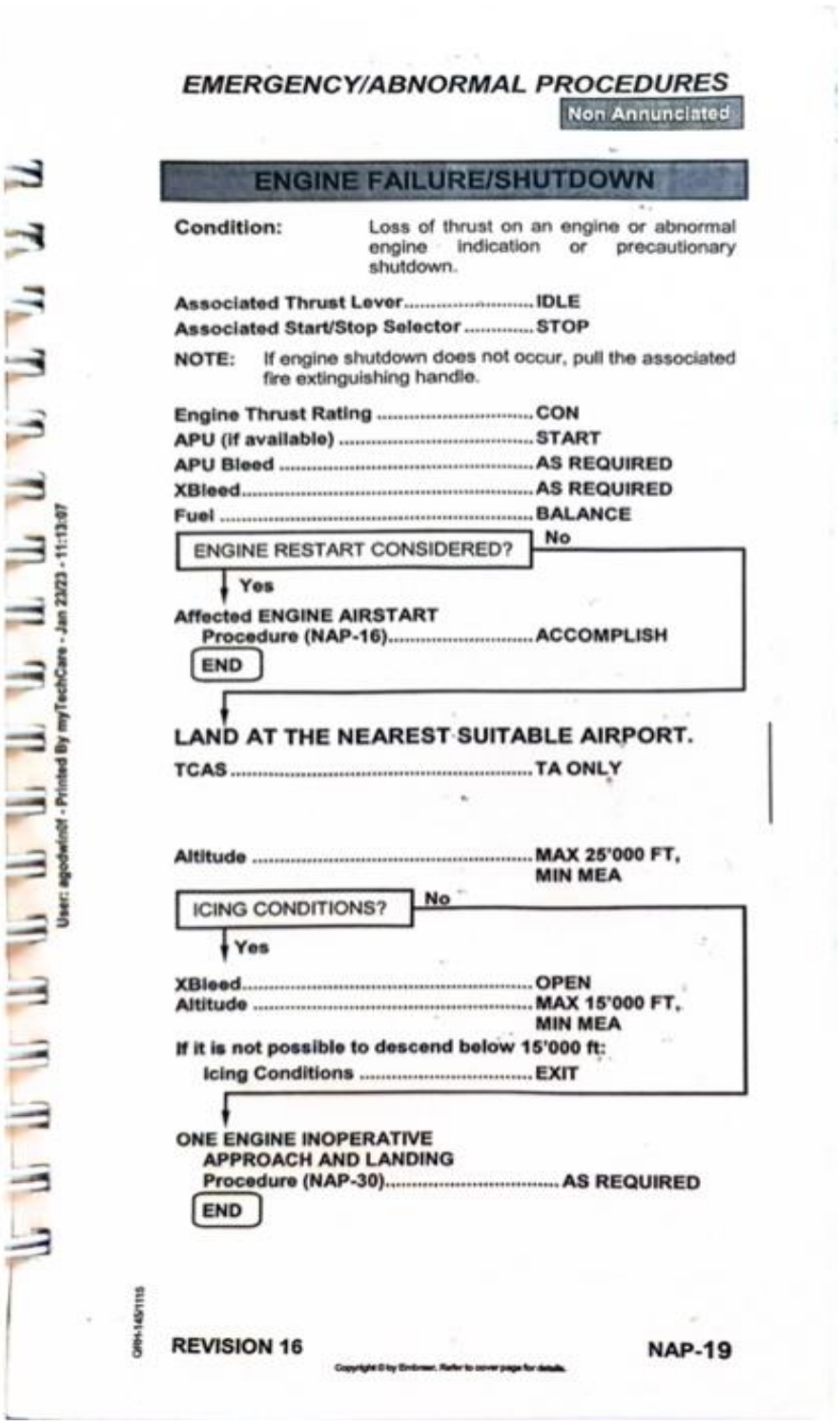


EMERGENCY/ABNORMAL PROCEDURES

Non Annunciated

ENGINE FAILURE/SHUTDOWN

Condition: Loss of thrust on an engine or abnormal engine indication or precautionary shutdown.

Associated Thrust Lever ..... **IDLE**
Associated Start/Stop Selector ..... **STOP**

NOTE: If engine shutdown does not occur, pull the associated fire extinguishing handle.

Engine Thrust Rating ..... **CON**
APU (if available) ..... **START**
APU Bleed ..... **AS REQUIRED**
XBleed ..... **AS REQUIRED**
Fuel ..... **BALANCE**

ENGINE RESTART CONSIDERED? — **No**

Yes

Affected ENGINE AIRSTART
Procedure (NAP-16) ..... **ACCOMPLISH**

END

LAND AT THE NEAREST SUITABLE AIRPORT.

TCAS ..... **TA ONLY**

Altitude ..... **MAX 25'000 FT, MIN MEA**

ICING CONDITIONS? — **No**

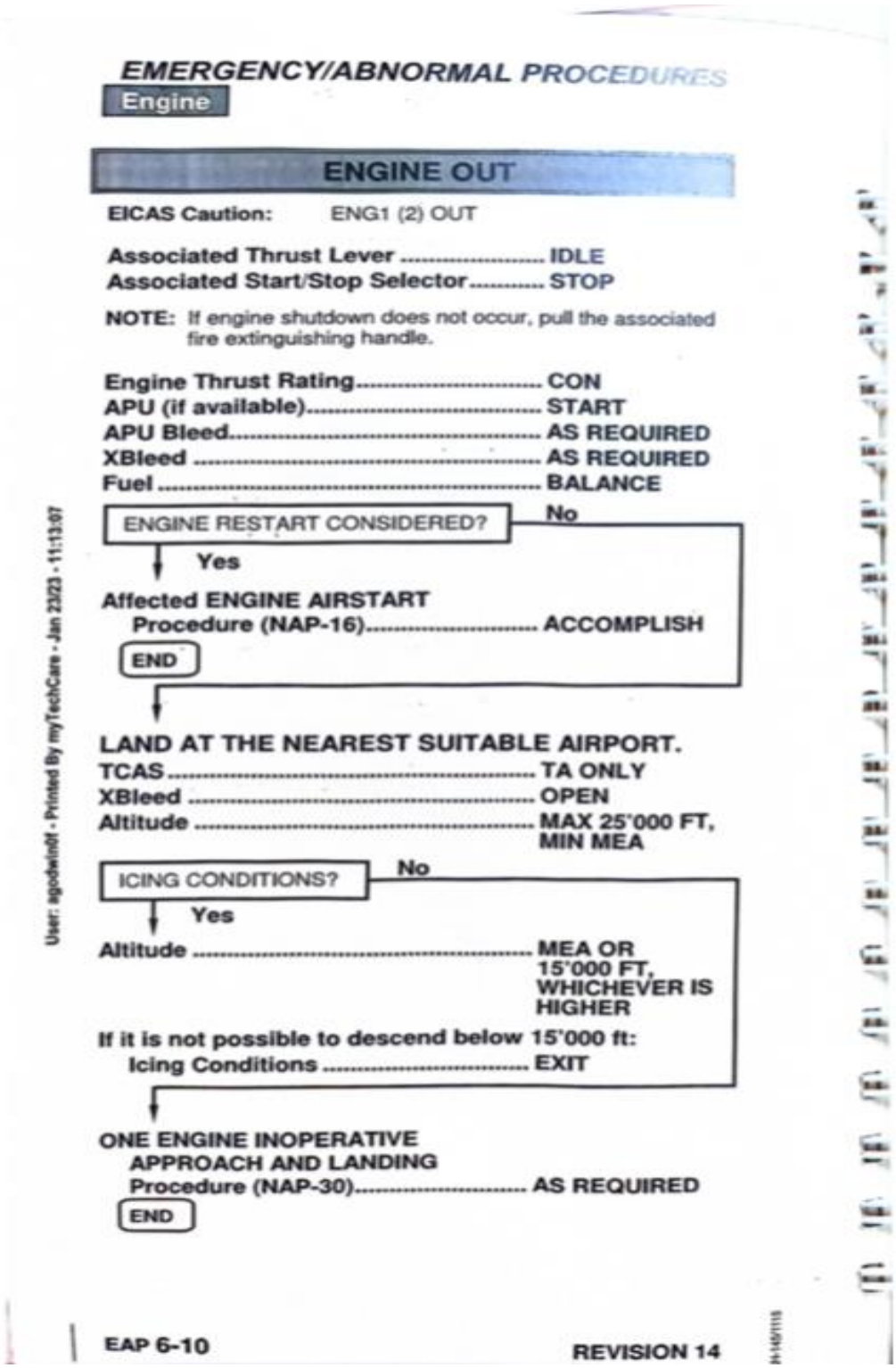
Yes

XBleed ..... **OPEN**
Altitude ..... **MAX 15'000 FT, MIN MEA**

If it is not possible to descend below 15'000 ft:
Icing Conditions ..... **EXIT**

ONE ENGINE INOPERATIVE APPROACH AND LANDING
Procedure (NAP-30) ..... **AS REQUIRED**

END



EMERGENCY/ABNORMAL PROCEDURES

Engine

ENGINE OUT

EICAS Caution: ENG1 (2) OUT

Associated Thrust Lever ..... IDLE
Associated Start/Stop Selector ..... STOP

NOTE: If engine shutdown does not occur, pull the associated fire extinguishing handle.

Engine Thrust Rating ..... CON
APU (if available) ..... START
APU Bleed ..... AS REQUIRED
XBleed ..... AS REQUIRED
Fuel ..... BALANCE

ENGINE RESTART CONSIDERED? — No

Yes

Affected ENGINE AIRSTART
Procedure (NAP-16) ..... ACCOMPLISH

END

LAND AT THE NEAREST SUITABLE AIRPORT.
TCAS ..... TA ONLY
XBleed ..... OPEN
Altitude ..... MAX 25'000 FT, MIN MEA

ICING CONDITIONS? — No

Yes

Altitude ..... MEA OR 15'000 FT, WHICHEVER IS HIGHER

If it is not possible to descend below 15'000 ft:
Icing Conditions ..... EXIT

ONE ENGINE INOPERATIVE APPROACH AND LANDING
Procedure (NAP-30) ..... AS REQUIRED

END

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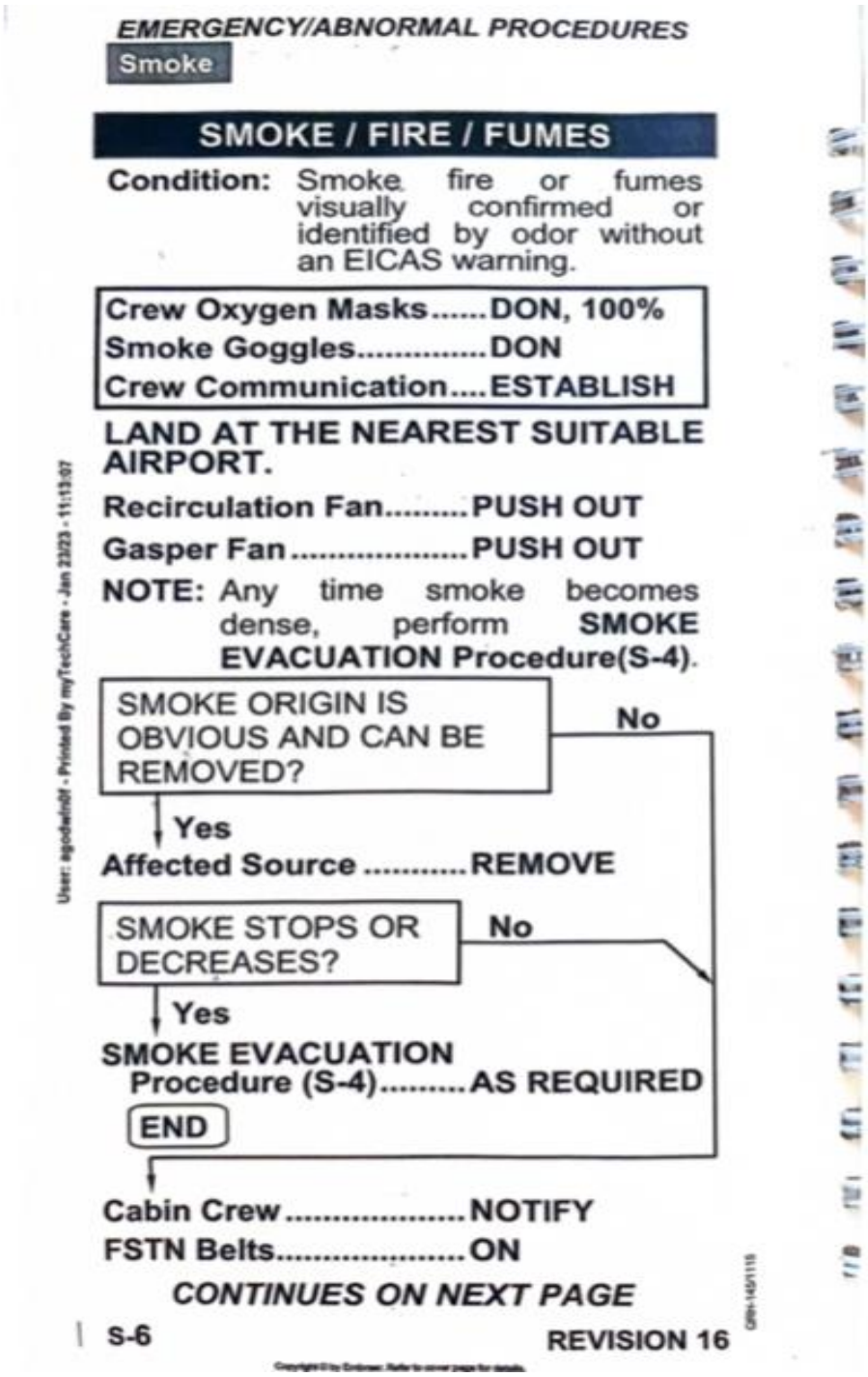

EMERGENCY/ABNORMAL PROCEDURES

Smoke

SMOKE / FIRE / FUMES

Condition: Smoke, fire or fumes visually confirmed or identified by odor without an EICAS warning.

Crew Oxygen Masks.....DON, 100%
Smoke Goggles.....DON
Crew Communication....ESTABLISH

LAND AT THE NEAREST SUITABLE AIRPORT.

Recirculation Fan.....PUSH OUT

Gasper Fan.....PUSH OUT

NOTE: Any time smoke becomes dense, perform **SMOKE EVACUATION Procedure(S-4).**

SMOKE ORIGIN IS OBVIOUS AND CAN BE REMOVED? — **No**

Yes

Affected Source .....REMOVE

SMOKE STOPS OR DECREASES? — **No**

Yes

SMOKE EVACUATION Procedure (S-4).....AS REQUIRED

END

Cabin Crew.....NOTIFY

FSTN Belts.....ON

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EMERGENCY/ABNORMAL PROCEDURES

Smoke

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Landing configuration:

Emergency lights.....ON

Flaps .....45°

V_{REF} .....$V_{REF\ 45°}$

END

Icing Conditions.....EXIT/AVOID

Airspeed .....MAX 250 KIAS

SG On Reversionary Panel 2.....PUSH IN

NOTE: PFD or MFD information is available in DU 4.

COM 1 on Digital Audio Panel 1.....PUSH IN

Do not set Thrust Lever 2 below idle in flight.

Monitor fuel quantity indication 2 through FMS.

Relevant Inoperative Items:

ADF 2/DME 2/VOR 2/VHF 2/ILS 2/MB 2	
Audio System 2	ISIS/Standby Altimeter
Brakes Inbd	RMU 2
DU 2 and 5	Standby Attitude Indicator
FMS 2	Steering
Ground Spoiler Inbd	Transponder 2

NOTE: Landing gear lever can not be moved up.

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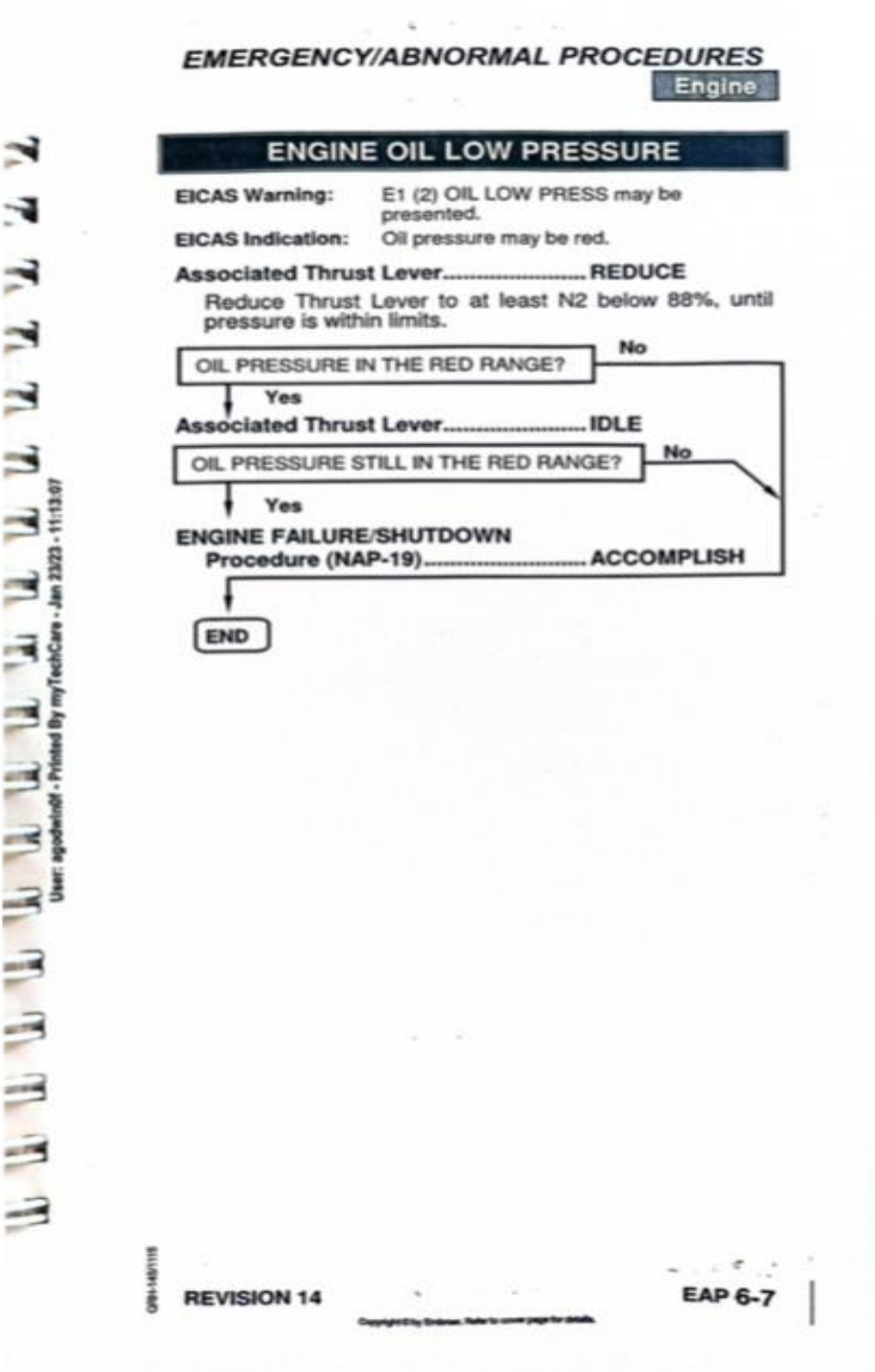


EMERGENCY/ABNORMAL PROCEDURES

Engine

ENGINE OIL LOW PRESSURE

EICAS Warning: E1 (2) OIL LOW PRESS may be presented.

EICAS Indication: Oil pressure may be red.

Associated Thrust Lever..... REDUCE

Reduce Thrust Lever to at least N2 below 88%, until pressure is within limits.

OIL PRESSURE IN THE RED RANGE? — No

Yes

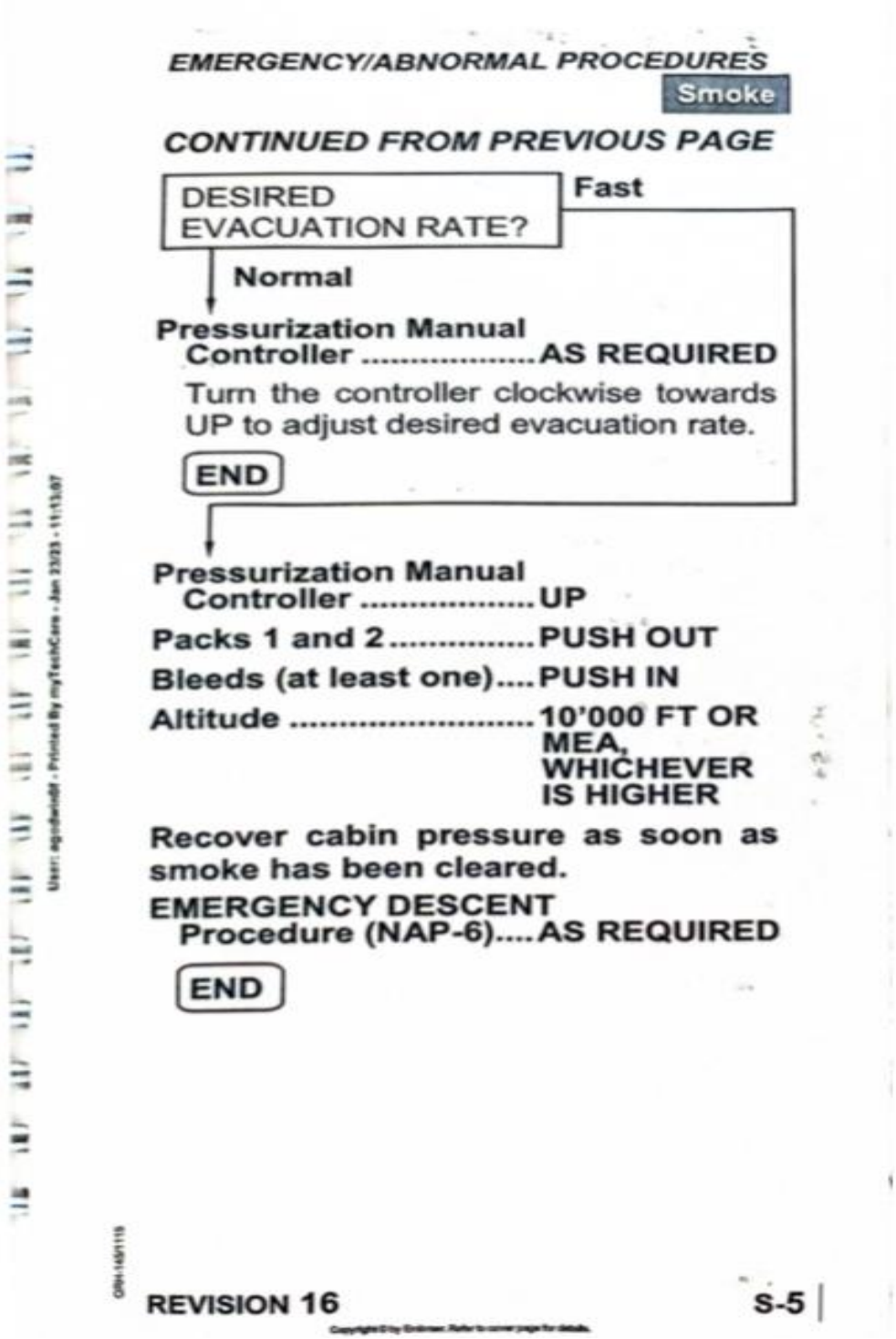
Associated Thrust Lever..... IDLE

OIL PRESSURE STILL IN THE RED RANGE? — No

Yes

ENGINE FAILURE/SHUTDOWN Procedure (NAP-19)..... ACCOMPLISH

END



EMERGENCY/ABNORMAL PROCEDURES

Smoke

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DESIRED EVACUATION RATE?

Fast

Normal

Pressurization Manual Controller ..... AS REQUIRED

Turn the controller clockwise towards UP to adjust desired evacuation rate.

END

Pressurization Manual Controller ..... UP

Packs 1 and 2 ..... PUSH OUT

Bleeds (at least one) .... PUSH IN

Altitude ..... 10'000 FT OR MEA, WHICHEVER IS HIGHER

Recover cabin pressure as soon as smoke has been cleared.

EMERGENCY DESCENT Procedure (NAP-6) .... AS REQUIRED

END

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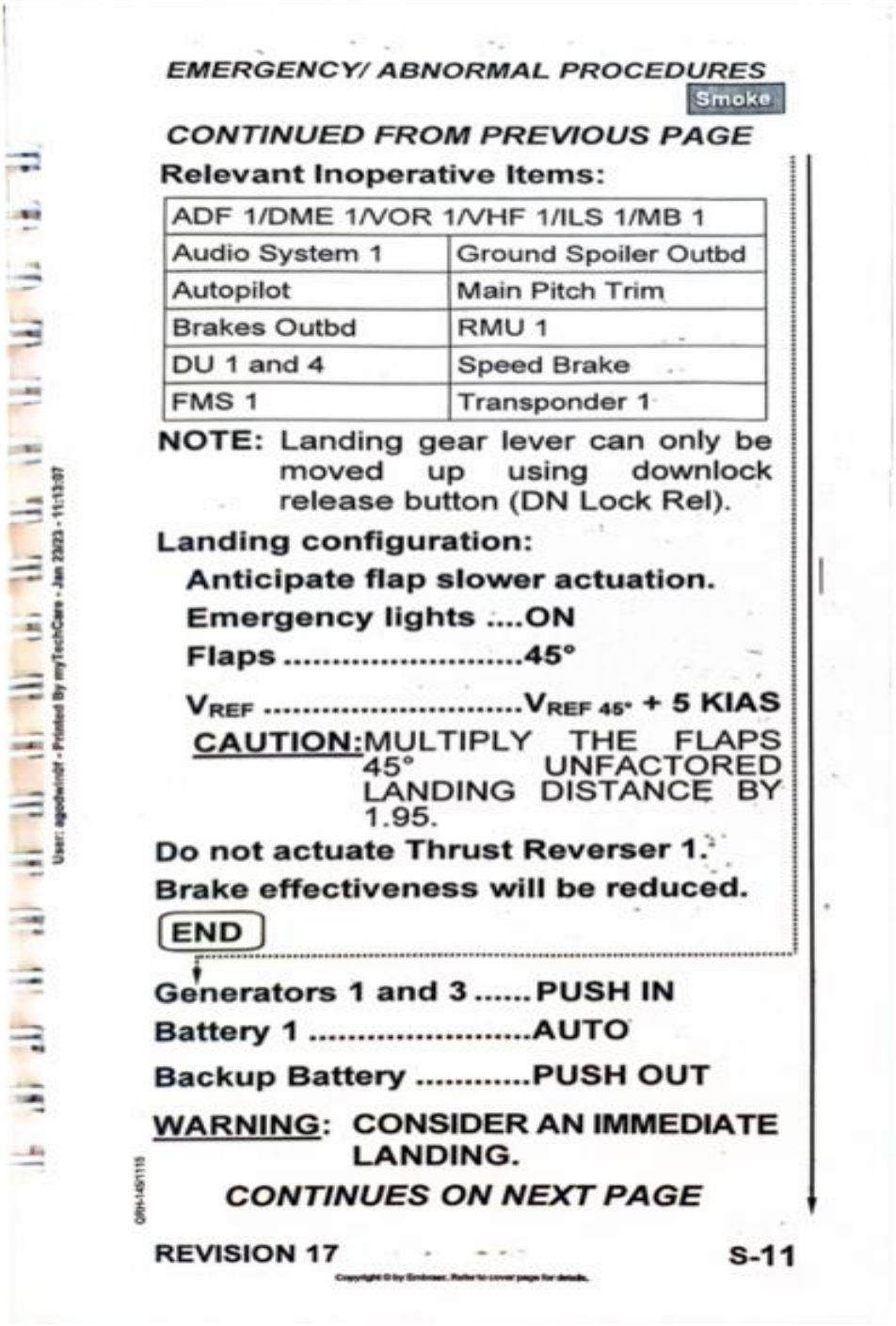

EMERGENCY/ ABNORMAL PROCEDURES

Smoke

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Relevant Inoperative Items:

ADF 1/DME 1/VOR 1/VHF 1/ILS 1/MB 1	
Audio System 1	Ground Spoiler Outbd
Autopilot	Main Pitch Trim
Brakes Outbd	RMU 1
DU 1 and 4	Speed Brake
FMS 1	Transponder 1

NOTE: Landing gear lever can only be moved up using downlock release button (DN Lock Rel).

Landing configuration:

Anticipate flap slower actuation.

Emergency lights ....ON

Flaps .....45°

V_{REF} .....$V_{REF\ 45°}$ + 5 KIAS

CAUTION: MULTIPLY THE FLAPS 45° UNFACTORED LANDING DISTANCE BY 1.95.

Do not actuate Thrust Reverser 1.

Brake effectiveness will be reduced.

END

Generators 1 and 3 .....PUSH IN

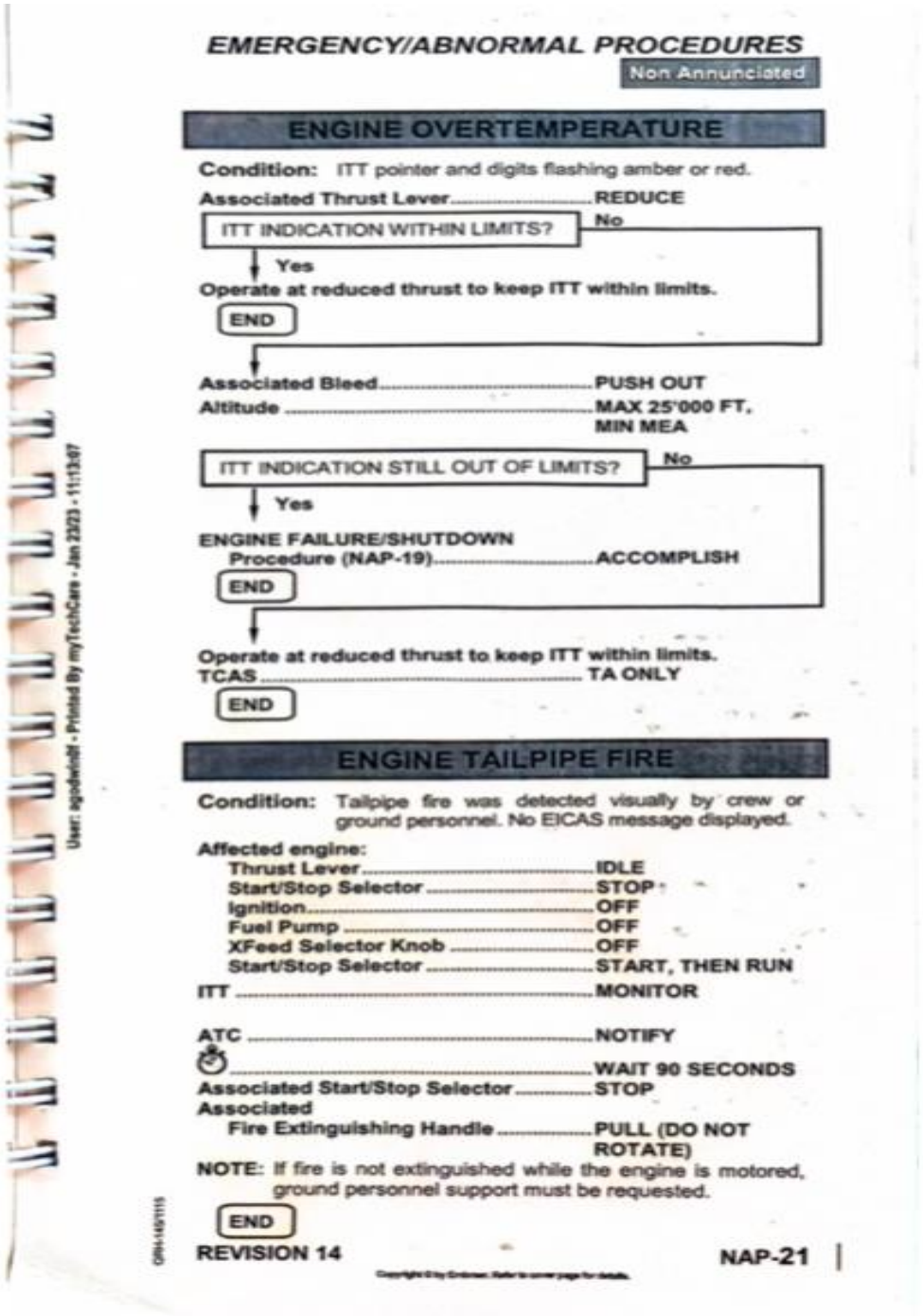
Battery 1 .....AUTO

Backup Battery .....PUSH OUT

WARNING: CONSIDER AN IMMEDIATE LANDING.

CONTINUES ON NEXT PAGE

REVISION 17 **S-11**



EMERGENCY/ABNORMAL PROCEDURES

Non Annunciated

ENGINE OVERTEMPERATURE

Condition: ITT pointer and digits flashing amber or red.

Associated Thrust Lever ..... **REDUCE**

ITT INDICATION WITHIN LIMITS? — No

Yes

Operate at reduced thrust to keep ITT within limits.

END

Associated Bleed ..... **PUSH OUT**

Altitude ..... **MAX 25'000 FT, MIN MEA**

ITT INDICATION STILL OUT OF LIMITS? — No

Yes

ENGINE FAILURE/SHUTDOWN
Procedure (NAP-19) ..... **ACCOMPLISH**

END

Operate at reduced thrust to keep ITT within limits.

TCAS ..... **TA ONLY**

END

ENGINE TAILPIPE FIRE

Condition: Tailpipe fire was detected visually by crew or ground personnel. No EICAS message displayed.

Affected engine:
- **Thrust Lever** ..... **IDLE**
- **Start/Stop Selector** ..... **STOP**
- **Ignition** ..... **OFF**
- **Fuel Pump** ..... **OFF**
- **XFeed Selector Knob** ..... **OFF**
- **Start/Stop Selector** ..... **START, THEN RUN**

ITT ..... **MONITOR**

ATC ..... **NOTIFY**

⏱ ..... **WAIT 90 SECONDS**

Associated Start/Stop Selector ..... **STOP**

Associated Fire Extinguishing Handle ..... **PULL (DO NOT ROTATE)**

NOTE: If fire is not extinguished while the engine is motored, ground personnel support must be requested.

END