TROUBLE SHOOTING MANUAL

HIGHLIGHTS

REVISION NO. 54 May 01/08

Pages which have been revised are outlined below, together with the Highlights of the Revision

CH/SE/SU C	REASON FOR CHANGE	EFFECTIVITY

PAGES

CHAPTER 05

L.E.P. 1- 1	REVISED TO REFLECT THIS REVISION INDICATING NEW, REVISED, AND/OR DELETED PAGES	
T. OF C. 1	REVISED TO REFLECT THIS REVISION	
05-0BSV	SILO5-0004 REMOVED/REJECTED	ALL
101- 103	NO DEFINITION	
	FAULT LIST UPDATED	ALL
05-50-00	CORRECTION/ADDITION/AMPLIFICATION	ALL
213, 215,	ADDED CROSS-REFERENCE AND CAUTION.	
239- 240	LAYOUT IMPROVED/MATERIAL RELOCATED	ALL
	EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)	ALL

TROUBLE SHOOTING MANUAL

CHAPTER 05

TIME LIMITS/MAINTENANCE CHECKS

LIST OF EFFECTIVE PAGES

N, R or D indicates pages which are New, Revised or Deleted respectively Remove and insert the affected pages and complete the Record of Revisions and the Record of Temporary Revisions as necessary

CH/SE/SU	С	PAGE	DATE	CH/SE/SU	С		PAGE	DATE	CH/SE/SU	С	PAGE	DATE
RECORD OF TEMP. REVISION				05-50-00 05-50-00 05-50-00 05-50-00			233 234	Aug01/07 Aug01/07 Aug01/07 Aug01/07				
L.E.P.			May01/08	05-50-00				Aug01/07				
T. of C.	R	1	May01/08	05-50-00 05-50-00				Aug01/07 Feb01/08				
05-0BSV	R	101	May01/08	05-50-00		N		May01/08				
05-0BSV	R	102	May01/08	05-50-00		N	240	May01/08				
05-0BSV	R	103	May01/08									
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CHAPTER 05

TIME LIMITS/MAINTENANCE CHECKS

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Lightning Strike Engine Bird Strike or Slush Ingestion			217	ALL ALL
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Landing Gear Extension at more than the Geardown Limiting speed Flap/Slat Extension at more than the Flap/Slat Limiting Speed				ALL ALL
Flight Excessive Load Factor due to Turbulence or Maneuver or in Excess of VMO/MMO				ALL
Engine Failure Overweight Taxiing Very High Winds on Ground Leaks - Permitted Values			230 231 232 233	
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TIME LIMITS/MAINTENANCE CHECKS - FAULT SYMPTOMS

	WARNINGS/MALFUNCTIONS		FAULT - ISOLATION		
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	C PROCEDURE
	BIRD STRIKE				055000 P 214 T 810 803
R R R	BRAKE EMERGENCY Brake Emergency Application or Overheat				055000 P 239 T 810 825
	CARGO - fluid spillage in cargo compartment				055000 P 224 T 810 813
	DOORS - pax/crew doors abnormal movement				055000 P 225 T 810 814
	DUST STORM - flight through dust storm				055000 P 222 T 810 811
	ENGINE - engine bird strike				055000 P 217 T 810 806
	ENGINE - engine failure				055000 P 230 T 810 819
	ENGINE - engine side loads				055000 P 223 T 810 812
	ENGINE - engine slush ingestion				055000 P 217 T 810 806
R R R	ENGINE WINDMILLING Engine Windmilling (After Engine				055000 P 240 T 810 826
	F/CTL - flap/slat extension at more than flap/slat limiting speed				055000 P 228 T 810 817
	GROUND SEVERE CONDITIONS - severe conditions on ground				055000 P 222 T 810 811
	HAIL STRIKE				055000 P 214 T 810 803

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WARNINGS/MALFUNCTIONS	 	FAULT ISOLATION				
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	C	! !	
HIGH WINDS - very high winds on ground					055000 P 232 T 810 821	
IN-FLIGHT EXCESSIVE LOAD FACTOR - excessive load factor in maneuver					055000 P 229 T 810 818	
IN-FLIGHT EXCESSIVE LOAD FACTOR - excessive load factor in turbulence					055000 P 229 T 810 818	
IN-FLIGHT EXCESSIVE LOAD FACTOR - VMO/MMO exceeded					055000 P 229 T 810 818	
L/G - extension at more than the geardown limiting speed					055000 P 227 T 810 816	
LANDING - hard /overweight landing					055000 P 213 T 810 802	
LATERAL JERK AT TAKE-OFF			<u></u>		055000 P 234 T 810 823	
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NLG - NLG steering angle exceedance					055000 P 220 T 810 809	
NLG - NLG towing overload or overrun			T		055000 P 219 T 810 808	
NOISES - in-flight airframe noises					055000 P 201 T 810 801	
RUNWAY LEAVING					055000 P 221 T 810 810	
SEVERE ICING CONDITION - Flight in severe icing conditions					055000 P 238 T 810 824	

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LIADNITHCS (MALIFILMSTIONS			FAULT ISOLATION				
WARNINGS/MALFUNCTIONS 	SOURCE	MESSAGE	ATA	С			
TAIL RUNWAY IMPACT					055000 P 218 T 810 807		
TAXIING - overweight taxiing				 	055000 P 231 T 810 820		
TAXIWAY LEAVING					055000 P 221 T 810 810		
VIBRATIONS - in-flight airframe vibrations or pitch oscillations					055000 P 201 T 810 801		
VIBRATIONS - significant MLG vibration at touch- down					055000 P 226 T 810 815		
VOLCANIC ASH - flight through volcanic ash				† 	055000 P 222 T 810 811		
WHEEL - tire burst or tread throw					055000 P 215 T 810 804		

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UNSCHEDULED MAINTENANCE CHECKS - FAULT ISOLATION PROCEDURES

TASK 05-50-00-810-801

Identification of the Cause of In-Flight Airframe Vibrations and/or Noises

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
27-10-00-810-835	Vibrations Felt in the Forward Cabin and Cockpit
27-10-00-810-840	Aileron Oscillations
27-20-00-810-802	Airframe Vibration due to the Rudder
27-30-00-810-849	Vibrations Felt Along the Cabin and in the Cockpit
27-30-00-810-850	Vibrations Felt in the Rear Cabin
27-54-00-810-801	Flap Vibration
32-20-00-810-803	Vibrations Felt during Climb because of Incorrect
	Clearance of the NLG Aft Doors
52-11-00-810-826	Vibrations and Noise in the FWD Passenger/Crew Door
	Area
52-13-00-810-826	Vibrations and Noise in the Aft Passenger/Crew Door
	Area
53-35-00-810-801	Vibration and/or Noise felt in Mid Cabin
05-50-00-991-001	Fig. 201
05-50-00-991-002	Fig. 202
05-50-00-991-003	Fig. 203
05-50-00-991-004	Fig. 204
05-50-00-991-005	Fig. 205
05-50-00-991-006	Fig. 206

R 3. Fault Confirmation

R

R R R

R

A. Find the Cause of the Vibrations and/or noises

R NOTE: If the vibrations occurred in this configuration:
- vibrations along the cabin and in the cockpit and
- elevator control with SECs active and ELACs not active,
no trouble shooting is necessary (elevator oscillations are wider
in SEC mode than ELAC mode).

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(1) Use this procedure to find the cause of the vibrations. R R (Ref. Fig. 201/TASK 05-50-00-991-001) (a) Vibration reporting sheet. R (Ref. Fig. 202/TASK 05-50-00-991-002) R R If vibrations occur, the airline must record the related data on R the vibration reporting sheet. R You must use this sheet to start all trouble shooting procedures related to vibrations. R R NOTE: The more accurately the airline records the data on this R sheet, the easier the trouble shooting will be. (b) Decision tree. R (Ref. Fig. 203/TASK 05-50-00-991-003) R Refer to the decision tree and the data on the vibration R R reporting sheet to find: - the source of the vibrations R R - the type of corrective actions that are necessary. If you cannot find the cause of the vibrations with this tree, R use the decision table. R (c) Decision table. R (Ref. Fig. 204/TASK 05-50-00-991-004) R The decision table is made to help the operator to find the R possible causes of the vibrations. R R Each line of the table is related to one of the parameters shown R on the vibration reporting sheet. If this parameter is applicable (there is data for it in the R R vibration reporting sheet), you must highlight all the figures on R the line for the parameter. R When all the applicable lines are highlighted, add all the R highlighted figures in each vertical column. Record the total on the TOTAL line. R The highest totals show the most probable sources. R R NOTE: Item with a value below 20 are not significant. (d) Example of utilization of the decision tree and the decision R table. R (Ref. Fig. 205/TASK 05-50-00-991-005, 206/TASK 05-50-00-991-006) R 4. Fault Isolation

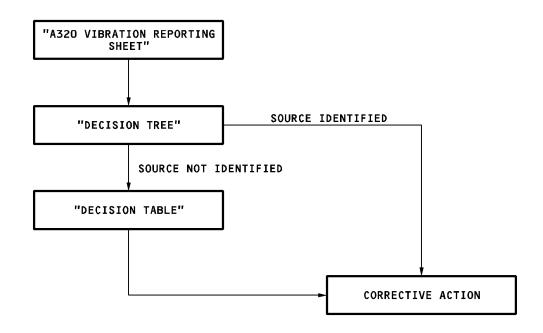
- A. Corrective Actions Types
 - (1) Type 1
 - (a) The cause of vibrations is incorrect rigging of the elevator or/and excessive play at the elevator trailing edges:
 - do the procedure: vibrations felt in the rear cabin (Ref. TASK 27-30-00-810-850).

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R

Process for the Identification of the Vibration Source Figure 201/TASK 05-50-00-991-001

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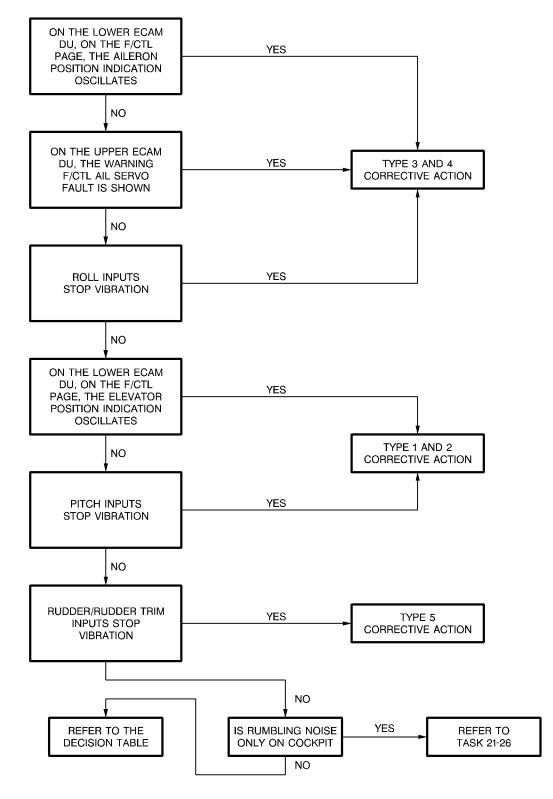
	IMPORTANT: THE VIBRATION REPORTING SHEET MUST BE FILLED IN PROPERLY BY THE FLIGHT CREW (ALL FIELDS MARKED (*) ARE MANDATORY). OTHERWISE, TROUBLE SHOOTING WILL BE	
	NOTE: FOR MAINTENANCE PERSONNAL, REFER TO TSM TASK 05-50-00-810-801 FOR FAULT ISOLATION PROCEDURE.	
ŀ	IN EACH BOX, PLEASE TICK THE CORRESPONDING DIVISION.	DATE
	GROSS WEIGHT: ALT: * SPEED:	
	ENG VIBRATION PARAMATERS: #1: #2:	
	* FLIGHT PHASE: CLIMB CRUISE DESCENT APPROACH	
	AIR TURBULENCE: YES NO L/G: UP DOWN	, 2
	* SLAT/FLAP POSITION: 0 1 2 3 FULL	FLT N
	* FLIGHT CONTROL OSCILLATION IS VISIBLE ON ECAM: YES NO	$\parallel \parallel$
	* IF YES, ON: RUDDER AILERON RH LH LH	
	* FLIGHT CREW TRIED TO STOP VIBRATION BY FLIGHT CONTROL INPUT: YES NO	$ \bigsqcup$
	→ IF YES, VIBRATION CAN BE STOPPED BY FLIGHT CONTROL INPUT ON:	 <u>;</u>
	1 ROLL Y 2 YAW Y 1 PITCH Y AIRBRAKE Y N 1 INPUT SHOULD BE DONE USING SIDE STICK	A/C IDENT:
	② INPUT SHOULD BE DONE USING PEDAL OR RUDDER TRIM	 ŏ
	VIBRATION CAN BE STOPPED BY FOLLOWING PARAMETER CHANGE: TUDUST IY ALTITUDE IY	
	* AFFECTED AREA:	
	COCKPIT FWD CABIN MID CABIN AFT CABIN	
	SPECIFIC LOCATION:	$ \sqcup $
	* AUDIBLE NOISE Y RUMBLING NOISE Y N	F/0:
"	VIBRATION INTENSITY: LIGHT MODERATE STRONG	
ABM0 06	VIBRATION FELT IN: LATERAL VERTICAL UNKNOWN	
00 2	GENERAL CREW COMMENTS (I.E. FREQUENCY, ORIGIN, NOISE, SPEED CHANGE EFFECT, VIBRATION STOPS AT END OF CLIMB, VIBRATION STARTS AT BEGINING OF THE DESCENT, AP STATUS,, ANY OTHERS COMMENTS):	$\ \ $
05 50		╽Ш
NL5		CAPT:
R	Vibration Reporting Sheet	

Vibration Reporting Sheet Figure 202/TASK 05-50-00-991-002

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Decision Tree Figure 203/TASK 05-50-00-991-003

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0	7	0	0	9	0	7	0										2	2	2	0	20	0		14	AIR R INLET DOOR
1	3	1	3	1	1	3	1										0	0	3	3	20	0		13	PAX DOOR
1	3	1	2	١	1	3	1										3	3	0	0	20	0		12	PAX
0	7	0	9	0	0	7	0										0	0	9	0	20	0		11	RING
1	3	1	2	1	1	2	1										0	0	9	0	20	0		10	BELLY FAIRING
8	ı	2	0	0	2	7	7										0	0	9	0	20	0		6	BELI
1	2	9	0	0	0	7	0	0	0	0	0	0	0	10	0	0	9	0	0	0	0	20		8	NLG DOOR
1	2	1	7	7	1	2	1	0	0	0	0	0	0	10	0	0	0	0	9	0	0	20		2	AIL.S BOX
7	0	0	0	0	9	0	7										1	1	3	1	0	20		FLÁPS	
2	7	2	l	l	1	7	7	0	0	9	0	7	0	0	1	1	7	1	1	5	0	20		5 RUD	LS
1	٤	0	5	0	l	2	l	0	10	0	0	0	0	0	0	0	l	7	3	0	0	20		JSO OSC	FLIGHT CONTROLS
1	٤	0	5	0	1	2	1	0	0	0	0	10	0	0	0	0	1	2	3	0	0	20		3 AIL	IGHT (
1	3	1	3	1	1	3	1	10	0	0	0	0	0	0	0	0	2	1	1	2	0	20		ELEV OSC	표
0	4	3	3	0	0	7	0	0	0	0	5	0	3	0	1	1	0	0	2	4	0	20		ELEV	
<250KTS	>250KTS	CLIMB	CRUISE	DESCENT	APPROACH	CLEAN	EXTENDED	ELEVATOR	AILERON	YAW	PITCH	ROLL	AIRBRAKES	NO EFFECT	THRUST	ALTITUDE	COCKPIT	FWD	MID	AFT	YES	NO		TION	
4990	SPEED		FLIGHT	PHASE		SLATS/FLAPS	POSITION	OSCILLATIONS	ON ECAM			INPUT FLIGHT CONTROLS			FLIGHT PARAMETER	CHANGE		AFFECTED	AREA		AUDIBLE	NOISE	TOTAL	CORRECTIVE ACTI TYPE	

R

Decision Table Figure 204/TASK 05-50-00-991-004

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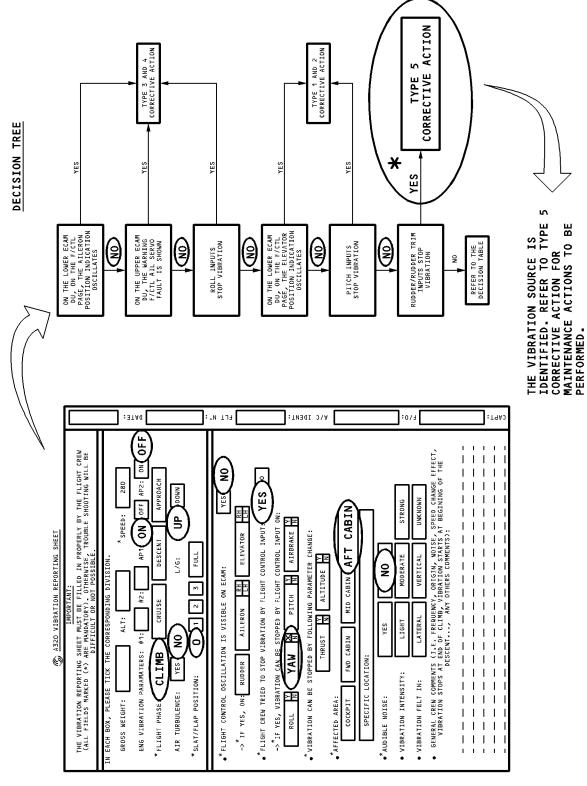
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Example of How to Use the Decision Tree Figure 205/TASK 05-50-00-991-005- 12 (SHEET 1)

EFF: ALL

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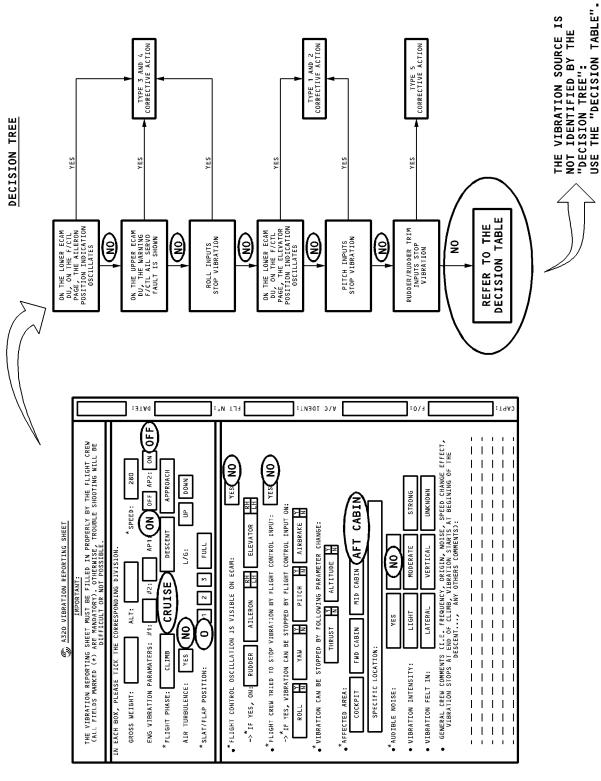
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Example of How to Use the Decision Tree Figure 205/TASK 05-50-00-991-005- 22 (SHEET 2)

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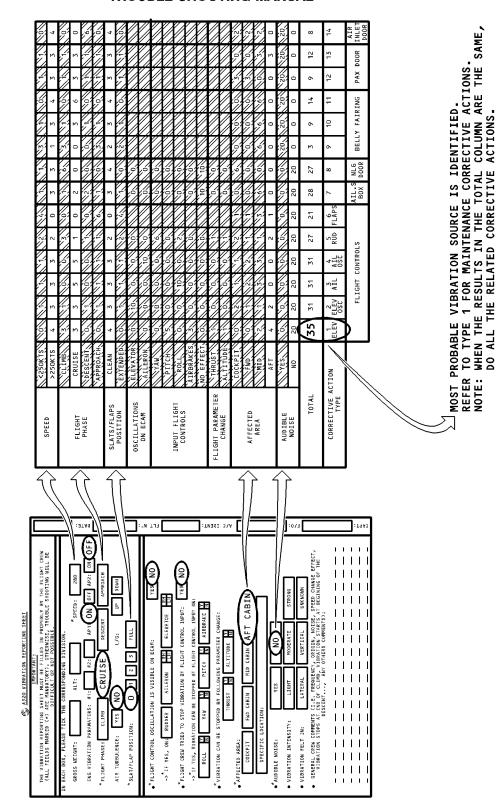
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Example of How to Use the Decision Table Figure 206/TASK 05-50-00-991-006

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(2) Type 2

- (a) The cause of vibrations is the elevator servocontrol oscillations:
 - do the procedure: vibrations felt along the cabin and in the cockpit (Ref. TASK 27-30-00-810-849).

(3) Type 3

- (a) The cause of vibrations is excessive play at the aileron trailing edges:
 - do the procedure: vibrations felt in the forward cabin and cockpit (Ref. TASK 27-10-00-810-835).

(4) Type 4

- (a) The cause of vibrations is the aileron servocontrol oscillations: - do the procedure: aileron oscillations (Ref. TASK 27-10-00-810-840)
- (5) Type 5
 - (a) The cause of vibrations is excessive play at the rudder trailing edge:
 - do the procedure: vibrations felt in the rear cabin and along the fuselage (Ref. TASK 27-20-00-810-802).
- (6) Type 6
 - (a) The cause of vibrations is abnormal condition of the flap (1):
 do the procedure: flap vibration (Ref. TASK 27-54-00-810-801).
- (7) Type 7
 - (a) Not applicable
- (8) Type 8
 - (a) The cause of vibrations is excessive play in the NLG aft door gimbal joints:
 - do the procedure: vibrations felt during climbs caused by abnormal clearance of the aft nose landing-gear doors (Ref. TASK 32-20-00-810-803).
- (9) Type 9
 - (a) The cause of vibrations is the seal of belly fairing panels 191 and 192BT:
 - do the procedure: vibration and/or noise felt in mid cabin (Ref. TASK 53-35-00-810-801).

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(10) Type 10

- (a) The cause of vibrations is the seals of belly fairing panels 191 and 192DT:
 - do the procedure: vibration and/or noise felt in mid cabin (Ref. TASK 53-35-00-810-801).

(11) Type 11

- (a) The cause of vibrations is the seals of belly fairing panels 191 and 192ET:
 - do the procedure: vibration and/or noise felt in mid cabin (Ref. TASK 53-35-00-810-801).
- (b) The cause of vibrations is the seal of belly fairing panels 191 and 192LB:
 - do the procedure: vibration and/or noise felt in mid cabin (Ref. TASK 53-35-00-810-801).

(12) Type 12

- (a) The cause of vibrations is the forward passenger/crew door cover plates:
 - do the procedure: vibrations and noise in the forward passenger/crew door area (Ref. TASK 52-11-00-810-826).

(13) Type 13

- (a) The cause of vibrations is the aft passenger/crew door cover plates:
 - do the procedure: vibrations and noise in the aft passenger/crew door area (Ref. TASK 52-13-00-810-826).

(14) Type 14

(a) Not applicable

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TASK 05-50-00-810-802

Hard/Overweight Landing

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM	05-51-11-200-004	<pre>Inspection After Hard/Overweight Landing for Aircraft without Enhanced DMU/FDIMU Load Report 15</pre>
AMM	05-51-11-200-004	<pre>Inspection After Hard/Overweight Landing for Aircraft with Enhanced DMU/FDIMU Load Report 15</pre>

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
- R **ON A/C 201-208, 227-227, 229-244, 276-284, 476-478,
 - A. After a hard/overweight landing:
 - (1) Do the procedure: Inspection after Hard/Overweight Landing (Ref. AMM TASK 05-51-11-200-004).

**ON A/C ALL

- R Post SB 31-1111 For A/C 201-208,227-227,229-244,276-284,476-478,
 - A. After a hard/overweight landing:
 - (1) Do the procedure: Inspection after Hard/Overweight Landing (Ref. AMM TASK 05-51-11-200-004).

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**ON A/C ALL

TASK 05-50-00-810-803

- R Airframe Bird or Hail Strike
 - 1. Possible Causes
 - 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 05-51-14-200-001	Inspection of the Airframe after a Bird or Hail Strike in Flight
AMM 05-51-14-200-002	Inspection of the Airframe after a Hail Strike on Ground

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After a bird or hail strike:
 - (1) Do the procedure: Inspection of the Airframe after a Bird or Hail Strike in Flight (Ref. AMM TASK 05-51-14-200-001).
 - (2) Do the procedure: Inspection of the Airframe after a Hail Strike on Ground (Ref. AMM TASK 05-51-14-200-002).

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TASK 05-50-00-810-804

Tire Burst or Tread Throw or Wheel Failure

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

	REFE	RENCE	DESIGNATION	
	AMM	05-51-15-200-001	Inspection after a Tire Burst or Tread Throw or Wheel Failure	
R	AMM	32-42-00-720-002	Functional test of the tachometers	
	3. <u>F</u>	ault Confirmation		

- A. Not Applicable
- 4. Fault Isolation
 - A. After a tire burst or tread throw:

R	CAUTION	: DURING THE FUNCTIONAL TEST OF THE TACHOMETERS, MAKE SURE THAT
R		THE OPERATION OF THE BRAKE PISTONS IS CORRECT AND AGREES WITH
R		EACH STEP GIVEN IN THIS TEST: INCORRECT OPERATION OF THE BRAKE
R		PISTONS CAN BE CAUSED BY A BAD OR A CROSSED CONNECTION OF THE
R		TACHOMETERS DURING INSTALLATION, AND CAN CAUSE UNSATISFACTORY
R		BRAKING AND/OR A TIRE BURST DURING AIRCRAFT OPERATION.

- (1) Do the procedure: Inspection of the Aircraft after a Tire Burst or Tread Throw or Wheel Failure (Ref. AMM TASK 05-51-15-200-001).
- R (2) Do the functional test of tachometers (Ref. AMM TASK 32-42-00-720- R 002).

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TASK 05-50-00-810-805

Lightning Strike

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 05-51-18-200-001 Inspection after Lightning Strike

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After a lightning strike:
 - (1) Do the procedure: Inspection after Lightning Strike (Ref. AMM TASK 05-51-18-200-001).

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TASK 05-50-00-810-806

Engine Bird Strike or Slush Ingestion

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 05-51-19-200-001	Inspection of the Engine after a Bird Strike or Slush Ingestion

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation

R

R

- A. After an engine bird strike or slush ingestion:
- (1) Do the procedure: Inspection of the Engine after a Bird Strike or Slush Ingestion (Ref. AMM TASK 05-51-19-200-001).

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TASK 05-50-00-810-807

Tail Runway Impact

- 1. Possible Causes
- 2. Job Set-up Information

A. Referenced Information

REFERENCE

DESIGNATION

AMM 05-51-21-200-001 Inspection after a Tail Runway Impact

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After a tail runway impact:
 - (1) Do the procedure: Inspection after a Tail Runway Impact (Ref. AMM TASK 05-51-21-200-001).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-808

R NLG Towing Overload or Overrun

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 05-51-22-200-001 Inspection After a NLG Towing Overload or Overrun

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After a NLG towing overload or overrun:
- (1) Do the procedure: Inspection after NLG Towing Overload or Overrun (Ref. AMM TASK 05-51-22-200-001).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-809

R NLG Steering Angle of more than 95 deg.

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 05-51-23-200-001

Inspection after NLG Steering Angle of more than 95 deg.

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After a NLG steering angle:

R (1) Do the procedure: Inspection after NLG Steering Angle of more than 95 deg. (Ref. AMM TASK 05-51-23-200-001).

EFF: ALL 05-50-00

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-810

- R Leaving Runway or Taxiway
 - 1. Possible Causes
 - 2. Job Set-up Information
 - A. Referenced Information

DESTRUCTION DESTRUCTION

REFERENCE

DESIGNATION

AMM 05-51-24-200-001 Inspection after Leaving Runway or Taxiway

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After a runway or taxiway leaving:
- R (1) Do the procedure: Inspection after Leaving Runway or Taxiway (Ref. AMM TASK 05-51-24-200-001).

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TASK 05-50-00-810-811

Flight Through Dust Storm/Volcanic Ash or Severe Conditions on Ground

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM	05-51-25-200-002	Inspection after Flight through Dust Storm or Dust Contamination on Ground
AMM	05-51-25-200-003	Inspection after Flight through Volcanic Ash or Volcanic Ash Contamination on Ground

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After a flight through dust storm/volcanic ash or severe conditions on ground:
 - (1) Do the procedure: Inspection after Flight Through Dust Storm or Dust Contamination on Ground (Ref. AMM TASK 05-51-25-200-002) or Inspection after Flight Through Volcanic Ash or Volcanish Ash Contamination on Ground (Ref. AMM TASK 05-51-25-200-003).

EFF: ALL 05-50-00

TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-812

- R Impact on Engine Cowls
 - 1. Possible Causes
 - 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 05-51-27-200-001 Inspection after Impact on Engine Cowls

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After an engine side loads:
- R (1) Do the procedure: Inspection after Impact on Engine Cowls (Ref. AMM TASK 05-51-27-200-001).

EFF: ALL 05-50-00

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-813

- R Fluid Spillage
 - 1. Possible Causes
 - 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 05-51-28-200-002 Procedure after Fluid Spillage

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After fluid spillage in cargo compartment:
- R (1) Do the procedure: Inspection after Fluid Spillage (Ref. AMM TASK 05-51-28-200-002).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-814

Abnormal Pax/Crew Door Movement

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 05-51-29-200-001

Inspection after Abnormal Movement of the Pax/Crew Door

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After an abnormal pax/crew door movement:
 - (1) Do the procedure: Inspection after Abnormal Pax/Crew Door Movement (Ref. AMM TASK 05-51-29-200-001).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-815

Significant MLG Vibration at Touch-Down

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 05-51-31-200-001

Inspection after Significant MLG Vibration at Touch-Down

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After significant MLG Vibration at touch-Down:
 - (1) Do the procedure: Inspection after Significant MLG Vibration at touch down (Ref. AMM TASK 05-51-31-200-001).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-816

- R Landing Gear Extension at more than the Geardown Limiting speed
 - 1. Possible Causes
 - 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 05-51-12-200-001	Inspection after Landing Gear Extension at more than the Geardown Limiting Speed

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation

R

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- A. After landing gear extension at more than the geardown limiting speed:
- (1) Do the procedure: Inspection after Landing Gear Extension at more than the Geardown Limiting Speed (Ref. AMM TASK 05-51-12-200-001).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-817

Flap/Slat Extension at more than the Flap/Slat Limiting Speed

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION

AMM 05-51-13-200-001

Inspection after Flap/Slat Extension at more than the Flap/Slat Limiting Speed

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation

R

- A. After flap/slat extension at more than the flap/slat limiting speed:
 - (1) Do the procedure: Inspection after Flap/Slat Extension at more than the Flap/Slat Limiting Speed (Ref. AMM TASK 05-51-13-200-001).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-818

- R Flight Excessive Load Factor due to Turbulence or Maneuver or in Excess of VMO/MMO
 - 1. Possible Causes
 - 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 05-51-17-200-001	Inspection after in Flight Excessive Load Factor due to Turbulence or Maneuver or in Excess of VMO/MMO

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation

R

A. After in flight excessive load factor due to turbulence or maneuver or in excess of VMO/MMO:

(1) Do the procedure: Inspection after in Flight Excessive Load Factor due to Turbulence or Maneuver or in Excess of VMO/MMO (Ref. AMM TASK 05-51-17-200-001).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-819

Engine Failure

- 1. Possible Causes
- 2. Job Set-up Information

A. Referenced Information

DEFENDE DESCRIPTION

REFERENCE

DESIGNATION

AMM 05-51-26-200-001 INSPECTION AFTER ENGINE FAILURE

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After engine failure:
 - (1) Do the procedure: Inspection after Engine Failure (Ref. AMM TASK 05-51-26-200-001).

EFF: ALL

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-820

Overweight Taxiing

- 1. Possible Causes
- 2. Job Set-up Information

A. Referenced Information

DEFENDING

REFERENCE

DESIGNATION

AMM 05-51-41-200-001 Inspection after Overweight Taxiing

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After overweight taxiing:
 - (1) Do the procedure: Inspection after Overweight Taxiing (Ref. AMM TASK 05-51-41-200-001).

EFF: ALL

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-821

Very High Winds on Ground

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 05-51-42-200-001 Inspection after Very High Winds on Ground

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After the aircraft was in very high winds conditions on ground:
 - (1) Do the procedure: Inspection after Very High Winds on Ground (Ref. AMM TASK 05-51-42-200-001).

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-822

Leaks - Permitted Values

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 05-50-00-790-001 Fluid Leak Measurement - Maintenance Practices

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. Permitted Values To find all permitted fluid leak values:
 - (1) Do the procedure: Fluid Leak Measurement Maintenance Practices (Ref. AMM TASK 05-50-00-790-001) and repair if necessary.

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GA319/A320/A321

TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-823

Lateral Jerk at Take-off

1. Possible Causes

- rudder sharp deflection
- sudden nose wheel deflection
- sudden differential braking
- Engine differential or slow acceleration
- Engine N1/EPR mismatch or thrust asymmetry
- external disturbance

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
27-26-00-810-801	Failure of the Yaw Damper System
32-42-00-810-925	Trapped pressure in a brake on NORM or ALTN braking
	system, or brake dragging
32-51-00-810-825	Jerky Steering
32-51-00-810-836	Sudden Steering Swerve
71-00-00-810-807	The Engine is Slow to Accelerate
73-00-00-810-866	Stall of the engine 1 or 2 / Audible stall / Engine
	surge
73-00-00-810-880	Low Power or Slow/Hung Acceleration on Engine 1
73-00-00-810-881	Low Power or Slow/Hung Acceleration on Engine 2
73-00-00-810-882	Slow or Hung Acceleration and High EGT on Engine 1
73-00-00-810-883	Slow or Hung Acceleration and High EGT on Engine 2
73-00-00-810-890	Surge or Stall on Engine 1
73-00-00-810-891	Surge or Stall on Engine 2
77-00-00-810-852	Fluctuation of N1 or Auto Acceleration or Auto
00 00 0.0 052	Deceleration or No Throttle Response to TLA Command
	on Engine 1 or 2
77-00-00-810-860	N1 Mismatch during Take Off on Engine 1 or 2
05-50-00-991-008	Fig. 207

3. Fault Confirmation

R

R

- A. Find the cause of a lateral jerk at take-off.
 - (1) Decision Table

(Ref. Fig. 207/TASK 05-50-00-991-008)

The decision table is made to help the operator find the possible cause of a lateral jerk at take-off.

Each line of the table is related to one parameter.

If a parameter is applicable, you must highlight all the figures on the line for the parameter.

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	> 80KTS	ю	-	-	0	5
A/C SPEED	< 80KTS	1	3	1	0	5
	FROM LEFT	0	0	0	0	5
MOTERIAL	FROM RIGHT	0	0	0	0	5
WIND DIRECTION	FROM FRONT	0	0	0	0	2
	FROM REAR	0	0	0	0	2
VALINIIG VICABED VALINIIG VALIN	YES	0	0	0	0	5
A/C IAATING NEAKBI KUNWAT	ON	0	0	0	0	0
ONTINGEL MACC	ATA27	5	0	0	0	0
ECAM WAKNING	ATA32	0	5	5	0	0
ASYMMETRIC BRAKE	YES	0	0	5	0	0
TEMPERATURE	ON	0	0	0	0	0
N1/EPR ASYMMETRY OR	YES	0	0	0	5	0
ASYMMETRIC ACCELERATION	ON	0	0	0	0	0
TOTAL						
CORRECTIVE ACTION TYPE		٧	В	ວ	q	Е
		FLIGHT	NOSE WHEEL STEERING	BRAKING SYSTEM	ENGINES	EXTERNAL DISTURBANCE

R

Decision Table Figure 207/TASK 05-50-00-991-008

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When all the lines for the aplicable parameters are highlighted, add all the highlighted figures in each vertical column.

Record the total on the TOTAL line.

The highest totals show the most probable causes.

4. Fault Isolation

- A. Corrective Actions Types
 - NOTE: To make sure that the trouble is fully covered, do the corrective actions related to the two highest totals.

 E.g. if FLIGHT CONTROLS and EXTERNAL DISTURBANCE have the highest totals, the corrective actions will be TYPE A and TYPE E.

 If BRAKING SYSTEM and ENGINES have the highest totals, the corrective actions will be TYPE C and TYPE D.
 - (1) Type A
 - (a) The cause of the lateral jerk at take-off is a rudder sharp deflection.
 - do the procedure (Ref. TASK 27-26-00-810-801).
 - (2) Type B
 - (a) The cause of the lateral jerk at take-off is a sudden nose wheel deflection.
 - do the procedure (Ref. TASK 32-51-00-810-825) and (Ref. TASK 32-51-00-810-836).
 - (3) Type C
 - (a) The cause of the lateral jerk at take-off is sudden differential braking.
 - do the procedure (Ref. TASK 32-42-00-810-925)
 - (4) Type D: 2 possibilities
 - (a) Engine differential or slow acceleration.
 - do the procedure for CFM engines (Ref. TASK 71-00-00-810-807),
 (Ref. TASK 73-00-00-810-866) and (Ref. TASK 77-00-00-810-852).
 - do the procedures for IAE engines (Ref. TASK 73-00-00-810-880), (Ref. TASK 73-00-00-810-881), (Ref. TASK 73-00-00-810-882) and (Ref. TASK 73-00-00-810-883).
 - (b) Engine N1/EPR mismatch or thrust asymmetry.
 - do the procedure for CFM engines (Ref. TASK 77-00-00-810-860)
 - do the procedures for IAE engines (Ref. TASK 73-00-00-810-880), (Ref. TASK 73-00-00-810-881), (Ref. TASK 73-00-00-810-890) and (Ref. TASK 73-00-00-810-891).

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- (5) Type E
 - (a) The cause of the lateral jerk at take-off is an external disturbance.
 - no maintenance action is necessary.

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TROUBLE SHOOTING MANUAL

TASK 05-50-00-810-824

R Flight in Severe Icing Condition

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 05-51-45-200-001 Inspection after Flight in Severe Icing Conditions

- 3. Fault Confirmation
 - A. Not Applicable
- 4. Fault Isolation
 - A. After a flight in severe icing conditions:
- R (1) Do the procedure: Inspection after Flight in Severe Icing Conditions R (Ref. AMM TASK 05-51-45-200-001).

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TROUBLE SHOOTING MANUAL

- R TASK 05-50-00-810-825
- R Brake Emergency Application or Overheat
- R 1. Possible Causes
- R 2. Job Set-up Information
- R A. Referenced Information

R		
R	REFERENCE	DESIGNATION

) ------

R AMM 05-51-16-200-001 Inspection After Brake Emergency Application or Overheat

R AMM 32-42-00-720-002 Functional test of the tachometers

- R 3. Fault Confirmation
- R A. Not Applicable
- R 4. Fault Isolation
- R A. After a Brake Emergency Application or Overheat:
- R CAUTION: DURING THE FUNCTIONAL TEST OF THE TACHOMETERS, MAKE SURE THAT
 THE OPERATION OF THE BRAKE PISTONS IS CORRECT AND AGREES WITH
 EACH STEP GIVEN IN THIS TEST: INCORRECT OPERATION OF THE BRAKE
 PISTONS CAN BE CAUSED BY A BAD OR A CROSSED CONNECTION OF THE
 TACHOMETERS DURING INSTALLATION, AND CAN CAUSE UNSATISFACTORY
 BRAKING AND/OR A TIRE BURST DURING AIRCRAFT OPERATION.
- R (1) Do the procedure: Inspection after Brake Emergency Application or Overheat (Ref. AMM TASK 05-51-16-200-001).
- R (2) Do the functional test of tachometers (Ref. AMM TASK 32-42-00-720-R 002).

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- R TASK 05-50-00-810-826
- R Engine Windmilling (After Engine In-flight Shut-down)
- R 1. Possible Causes
- R 2. Job Set-up Information
- R A. Referenced Information

R		
R	REFERENCE	DESIGNATION

K REFERENCE DESIGNATION

R AMM 05-51-34-200-001 Inspection after Engine Windmilling (After Engine

R In-Flight Shut-Down)

- R 3. Fault Confirmation
- R A. Not Applicable
- R 4. Fault Isolation
- R A. After engine windmilling (after engine in-flight shut-down)
- R (1) Do the procedure: Inspection after Engine Windmilling (After Engine R In-flight Shut-down (Ref. AMM TASK 05-51-34-200-001).

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