

CAP Aviation 9, rue de l'Aviation 21121 DAROIS - France Tel +33 380 35 65 10 Fax +33 380 35 65 15 www.capaviation.com	S E R V I C E B U L L E T I N	
NUMBER	TITLE	ATA SYSTEM
N° 1	Engine mount inspection procedure	71

1. PLANNING INFORMATION

1.1 Approval

NOTA: This document is a courtesy translation of its original French version. Whereas the original French version of the information and instructions is approved, this *translation* is *not* approved.
 As a consequence, the approval mentions below are to be understood as applicable to the *original French version* of this SB.

The technical information contained in this document is approved under the privileges of the Design Organisation Agreement Nr° F.JA.06.

Revision	Date	Description	Airworthiness Office Manager	Head of Design Organisation
			Recommendation for approval	Approval
3	15/09/2000	Engine mount type 2 : only type available. Mandatory Service bulletin Inspection reminder		

1.2 Effectivity

Aircraft : type	CAP232	CAP231	CAP231EX
Serial Nr	all	all	all

Spare parts with Serial Nr	N/A
Serial Nr	N/A

1.2.1 For information :

Engine mount type 2 has been implemented during serial manufacturing on:

Aircraft : Type	CAP232
Serial Nr	032 - 999

Spare parts with Serial Nr	N/A
Serial Nr	N/A

1.3 Implementation

	SERVICE BULLETIN	DELAI D'APPLICATION
	Optional	
	Recommended	
X	Mandatory	Within the engine mount first 100 aerobatic hours, then, every 10 aerobatic flights.

1.4 Reason

To draw users' attention on inspection periodicity
 To improve engine mount reliability
 To inform about available parts references

1.5 Description

Critical areas visual examination after the first 100 aerobatic hours
 Critical areas visual examination repeated every 10 aerobatic flights
 Engine mount replacement in case of cracks

1.6 Manpower

The instructions contained in this Service Bulletin must only be performed by an approved workshop or maintenance unit.

Necessary lead time to perform inspection is evaluated to about:

- 45 min – 1 person

Necessary lead time for engine mount replacement is evaluated to about:

- 8 hours – 1 person

1.7 Material

The new and modified parts make up the material, and are mentioned in the chapter 3 of this Service Bulletin.

For civil customers, spare parts are to be supplied at ASCO Aviation Service Centre (Tel : +33 380 35 61 98, Fax : +33 380 35 60 58).

2. ACCOMPLISHMENT INSTRUCTIONS

2.1 Engine mount description

2.1.1 TYPE 1 engine mount (Ref. CAP230-70-01-00)

On the lower part of right and left diagonal tube of engine mount, it has been shown that cracks might appear in relation to the more or less heavy use of airplane, in spite of the few improvements of the basic definition.

This type of engine mount is no more available.

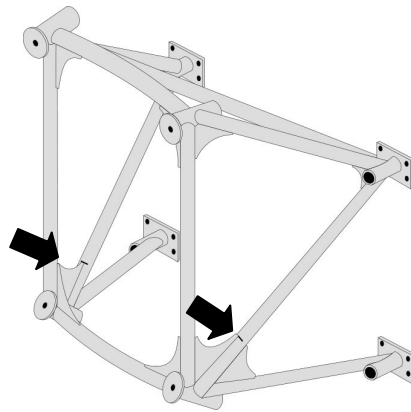


Fig. 1 – TYPE 1
Critical areas to be inspected

2.1.2 TYPE 2 engine mount (Ref. 7123-9203101)

Designed, at first, for CAP 231EX, this engine mount solved the lower part of right and left diagonal tube cracks problem (no crack found in 4 years time on 46 engine mounts in use).

Tube stress relief, due to converging tubes principle, led to dynafocal engine mount cup moving. Consequently, problem occurred in another place : on engine mount first version (Ref. 00), cracks appeared on engine mount cups fixation within 60 to 100 aerobatic hours.

Downward cups have been strengthened (ref. 02 – S/N 17 to 21, and S/N 23 to 40) and then, upward cups (Ref 03 – since S/N 41). Since this last modification, no in use incident has been reported on TYPE 2 engine mounts.

TYPE 2 engine mount is the only type available.

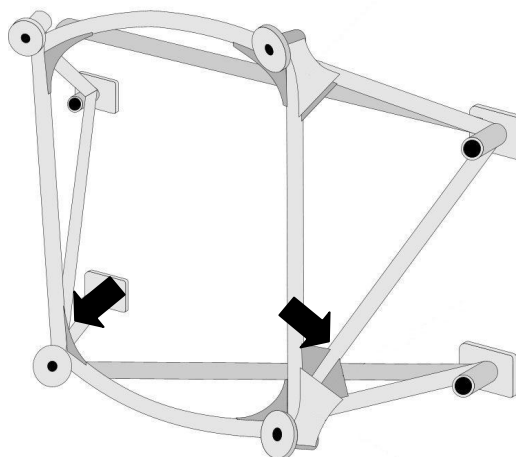


Fig. 2 – TYPE 2
Critical areas to be inspected : **at weld bead border at gusset plate end level.**

2.1.3 TYPE 3 engine mount (Ref. CAP230-70-01-00)

Last version of TYPE 1 engine mount, it takes into account part of TYPE 2 engine mount modifications :

- Diagonal tubes
- Gusset plates moved on tubes exterior
- Vertical diagonal tubes diameter increase

These improvements have not led to TYPE 2 engine mount reliability.
Therefore, TYPE 3 engine mounts are no more available.

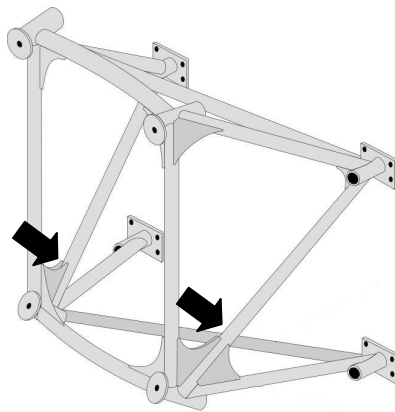


Fig. 3 – TYPE 3
Critical areas to
be inspected.

2.2 Inspections

2.2.1 After the first 100 aerobatics hours, then every 10 aerobatics flights

- A. Visual examination of critical areas
When in doubt:
 - B. Scrape off painting
 - C. Make a penetrant inspection
 - D. After inspection, protect cleaned area with oil film

2.2.2 In case of cracks

- A. Immediately inform CAP Aviation Airworthiness Office
- B. Replace damaged engine mount with a TYPE 2 new one

Nota :

- Exhaust pipe support : has to be replaced if TYPE 2 engine mount is installed instead of TYPE 1 or TYPE 3 (see Chapter 3 – Material information).
 - Engine attachment bolt : has to be replaced if TYPE 2 engine mount is installed instead of TYPE 1 or TYPE 3 (see Chapter 3 – Material information) because engine mount cups are different.
- C. Check silent blocks condition for replacement if necessary

3. MATERIAL INFORMATION

New P/N.	Quantity	Key word	Old P/N.	Instructions
7123-9203101	1	Engine mount	CAP230-70-01-00	Old reference to be discarded
CAP230-70-50-12	1	Exhaust pipe support for AEIO-540-L1B5D engine and TYPE 1 engine mount	CAP230-70-50-12	To be replaced if needed
7823-9210406	1	Exhaust pipe support for AEIO-540-L1B5D engine and TYPE 2 engine mount	7823-9210406	To be replaced if needed
7823-9903027	1	Exhaust pipe support for AEIO-540-L1B5D engine and TYPE 3 engine mount	7823-9903027	To be replaced if needed
7823-0009007	1	Exhaust pipe support for AEIO-540-L1B5 engine and TYPE 2 engine mount	7823-0009007	To be replaced if needed
7823-9506015	1	Exhaust pipe support for AEIO-540-L1B5 engine and TYPE 3 engine mount	7823-9506015	To be replaced if needed
AN7-50A	4	Bolt	AN7-35	Old reference to be discarded when engine mount replaced
AN365-720C	4	Stop nut	AN365-720	Old reference to be discarded when engine mount replaced
AN960-716	8	Washer	AN960-716	To be replaced if needed
J7764-22	4	Rubber mount (LORD)	J7764-22	To be replaced if needed
94016-44	4	Rubber mount (BARRY)	94016-44	To be replaced if needed
STD475	2	Self-locking washer for CAP230-70-50-12 , 7823-9210406 and 7823-9903027 supports	STD475	To be replaced if needed
STD1817	2	Screws for CAP230-70-50-12 , 7823-9210406 and 7823-9903027 supports	STD1817	To be replaced if needed
STD160	2	Self-locking washer for 7823-0009007 and 7823-9506015 supports	STD160	To be replaced if needed
STD8	2	Washer for all supports	STD8	To be replaced if needed
LW25-1-00	2	Screws for 7823-0009007 and 7823-9506015 supports	LW25-1-00	To be replaced if needed

For current prices, please contact ASCO Aviation Service Center.

APPENDIX I

**INFORMATION TO PROVIDE
 ON RECEIPT
 OF THIS SERVICE BULLETIN (Rev. 3)**

Present state

Aircraft :

Type : CAP.....

Serial Nr. :

Date	Aircraft	Engine mount			
	Number of hours	Type	Serial Nr.	Number of hours	Results of examinations performed until now

APPENDIX II

INFORMATION TO PROVIDE AFTER NEXT ENGINE MOUNT REPLACEMENT

Aircraft : **Type : CAP.....** **Serial Nr. :**

Date	Previous engine mount			New engine mount	
	Type	Serial Nr.	Number of hours	Type	Serial Nr.

APPENDIX III

SIX-MONTHLY INFORMATION REPORT

Detailed examination (100 hours) or visual examination (every 10 aerobatic flights)

Aircraft :

Type : CAP.....

Serial Nr. :

Date	Aircraft	Engine mount		
	Number of hours	Type	Serial Nr.	Number of hours
Remarks on 30/08/2001				

Date	Aircraft	Engine mount		
	Number of hours	Type	Serial Nr.	Number of hours
Remarks on 28/02/2002				

Date	Aircraft	Engine mount		
	Number of hours	Type	Serial Nr.	Number of hours
Remarks on 30/08/2002				

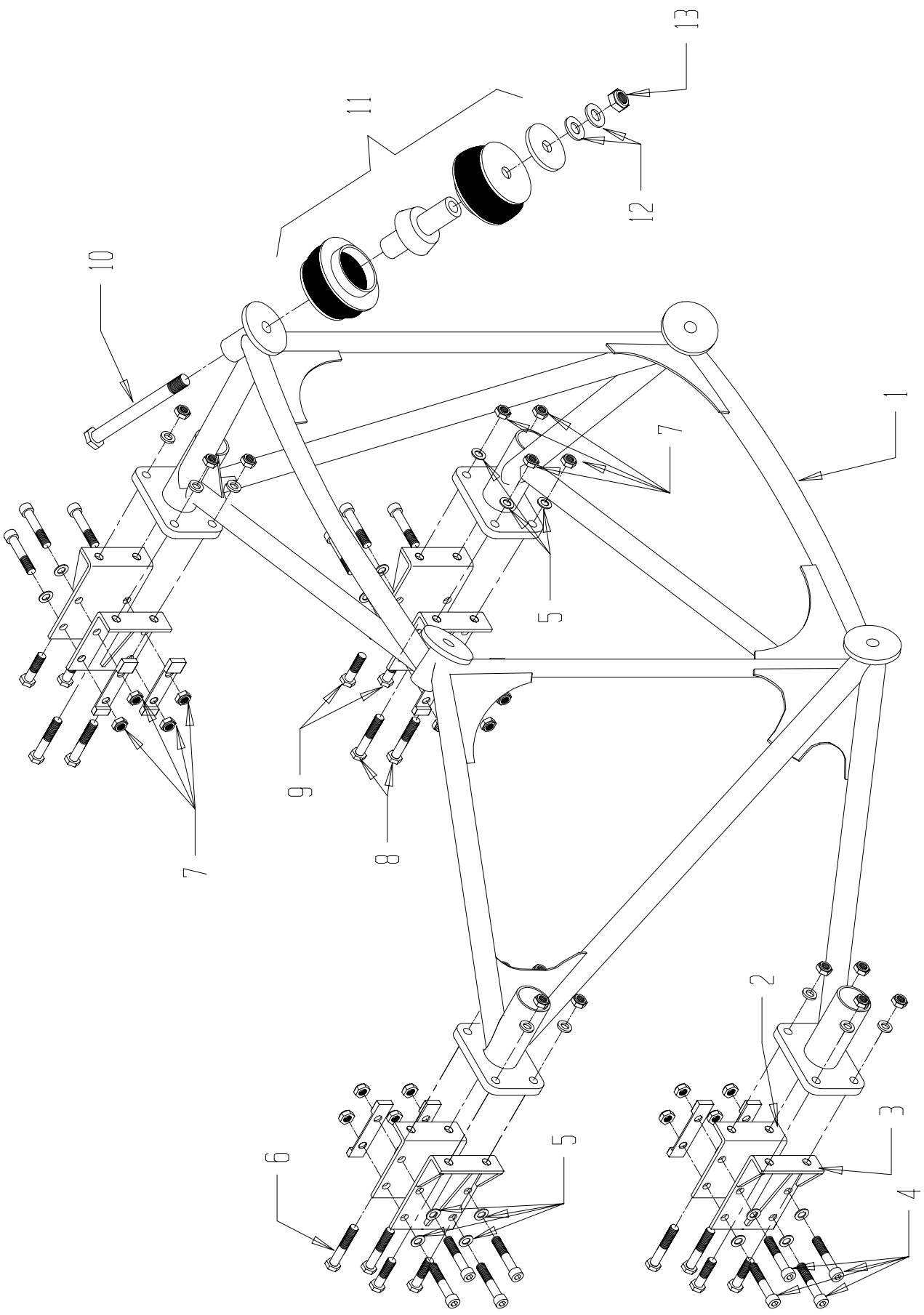




FIG. REP.	BLOC D'IDENTIFICATION		NNO	DÉSIGNATION 1234567	APPLI.	QTE
	CODE	REFERENCE FABRICANT				
1 001	FA9C1	7123-9203101		Bâti moteur		
1 002	FA9C1	CAP230-10-21-00	5340-14-443-5138	Bâti moteur	Voir BS1	1
1 003	FA9C1	CAP230-10-22-00	5340-14-420-8553	Equerre	001 999	4
1 004	F0110	E25125B80M60QLAT	5305-14-4485842	Equerre	001 999	4
1 005	F0111	23111AG080L	5310-14-2664353	Vis, tête creuse	001 999	16
1 006	F0111	22201BC080038L	5306-14-302-4469	Rondelle, plate	001 999	32
1 007	F0111	22542K080	5310-14-312-1944	Vis de précision	001 999	1
1 008	F0111	22201BC080036L	5306-14-302-4468	ecrou hexagonal	001 999	32
1 009	F0111	22201BC080011L	5306-14-302-4463	Vis de précision	001 999	7
1 010	88044	AN7-50A	5306-00-722-6131	Vis de précision	001 999	8
1 011	04665	94016-44		Axe	Voir BS1	4
1 011	76005	J7764-22	5340-01-141-7052	Support élastique		4
1 012	88044	AN960-716	5310-00-167-0822	Support élastique	001 999	4
1 013	88044	AN365-720C	5310-00-285-5632	Rondelle	001 999	8
				Ecrou autobloquant	Voir BS1	4

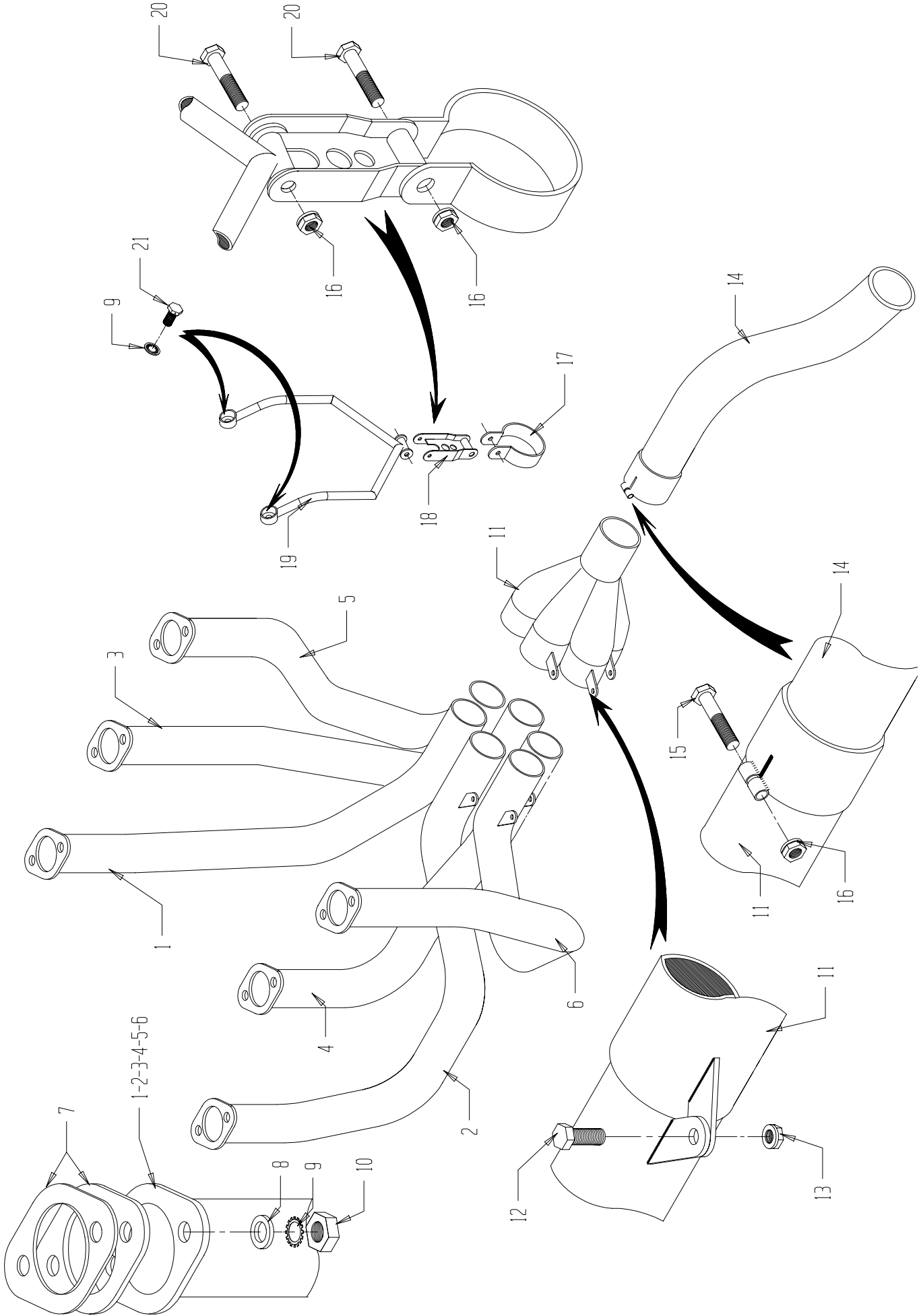




FIG. REP.	BLOC D'IDENTIFICATION		NNO	DÉSIGNATION 1234567	APPLI.	QTE
	CODE	REFERENCE FABRICANT				
				Echappement		
1 001	FA9C1	CAP230-70-50-01	2810-14-435-4281	Collecteur d'échappement	001 999	1
1 002	FA9C1	CAP230-70-50-02	2810-14-435-4280	Collecteur d'échappement	001 999	1
1 003	FA9C1	CAP230-70-50-03	2810-14-435-6094	Collecteur d'échappement	001 999	1
1 004	FA9C1	CAP230-70-50-04	2810-14-435-4279	Collecteur d'échappement	001 999	1
1 005	FA9C1	CAP230-70-50-05	2810-14-435-4282	Collecteur d'échappement	001 999	1
1 006	FA9C1	CAP230-70-50-06	2810-14-435-4283	Collecteur d'échappement	001 999	1
1 007	80254	75118	5330-00-069-9647	Joint	001 999	12
1 008	FA9C1	CAP230-70-50-09	5310-14-443-5067	Rondelle, plate	001 999	12
1 009	80254	STD475	5310-00-186-7510	Rondelle, bloquante	voir BS1	14
1 009	80254	STD160	5310-00-167-0719	Rondelle de blocage	voir BS1	2
1 010	80254	STD1410	5310-00-208-9219	Ecrou, hexagonal	001 999	12
1 011	FA9C1	CAP230-70-50-07	1560-14-435-4291	Raccord, tubulure	001 999	1
1 012	F0110	E25114B50Q10CKA	5305-14-430-1317	Vis	001 999	6
1 013	F0111	22541P050	5310-14-266-3870	Ecrou, hexagonal	001 999	6
1 014	FA9C1	CAP230-70-50-08	1560-14-443-5471	Tubulure, échappement	001 999	1
1 015	F0110	E25112B60M35CAA	5305-14-406-7392	Vis	001 999	1
1 016	F0111	22541P060	5310-14-252-5974	Ecrou, hexagonal	001 999	3
1 017	FA9C1	CAP230-70-50-10	4730-14-435-4286	Collier, tuyauterie	001 999	1
1 018	FA9C1	7813-9912045		Etrier	001 999	1
1 019	FA9C1	7823-9903027		Support	voir BS1	1
1 019	FA9C1	7823-9506015		Support	voir BS1	1
1 019	FA9C1	7823-9210406		Support	voir BS1	1
1 019	FA9C1	CAP230-70-50-12		Support	voir BS1	1
1 019	FA9C1	7823-0009007		Support	voir BS1	1
1 020	F0110	E25112B60M40RLA	5305-14-433-3955	Vis	001 999	2
1 021	80254	STD1817	5306-00-195-9509	Vis	voir BS1	2
1 021	80254	LW25-1-00	5306-01-281-1761	Vis	voir BS1	2
1 022	80254	STD8	5310-00-196-9004	Rondelle	voir BS1	2