



FEDERATION INTERNATIONALE DU SPORT AUTOMOBILE

Homologation N°

N - 5421 **N**

FN-030

1990年 8月31日

FICHE COMPLEMENTAIRE D'HOMOLOGATION EN GROUPE «N»
COMPLEMENTARY HOMOLOGATION FORM FOR GROUP «N»

Homologation valable à partir du 01 NOV. 1990 prononcée par FISA
Homologation valid as from _____ decided by _____

En complément de la fiche de Gr. A n° 5421
In addition to the Gr. A from n° _____

IMPORTANT:

La présente fiche comporte toutes informations complémentaires à la fiche d'homologation de base de Gr. A pour la participation du véhicule en groupe «N». En cas d'information contradictoire, seule l'information figurant sur la présente fiche complémentaire est à prendre en considération pour le Groupe «N».

IMPORTANT:

This form includes all the additional information to the basic Group A homologation form for the participation of the vehicle in Group «N». In the case of contradictory information, only the information appearing on the present additional form is to be taken into consideration for Group «N».

1. DEFINITIONS

101. Constructeur Fuji Heavy Industries Ltd.
Manufacturer _____

102. Dénomination(s) commerciale(s) – Modèle et type SUBARU LEGACY WAGON 2.0 4WD TURBO , BF
Commercial name(s) – Type and model _____

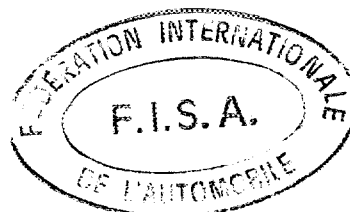
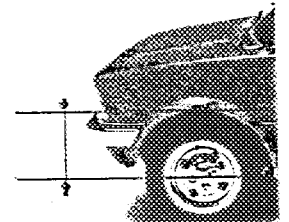
103. Cylindrée totale 1,994.4x1.7=3,390.5 cm³
Cylinder capacity _____

2. DIMENSIONS, POIDS / DIMENSIONS, WEIGHTS

201. Poids minimum 1,300 kg
Minimum weight _____

205. Hauteur minimum centre moyeu de roue /
ouverture du passage de roue
Minimum height center hub /
wheel arch opening

AV
Front 338 mm
AR
Rear 324 mm



Marque Fuji Modele BF N° Homol. N-5421 **N**

207. Voie maximum AV 1,495 mm AR 1,485 mm
 Maximum track Front Rear

208. Garde au sol minimum X X X X mm Endroit de la mesure X X X X
 Minimum ground clearance Where measured

3. MOTEUR / ENGINE

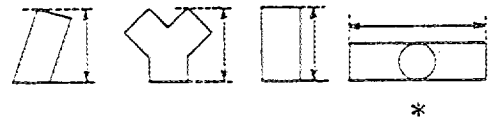
302. Nombre de supports 3
 Number of supports

308. Volume minimal total d'une chambre de combustion 64.08 cm³
 Total minimum volume of a combustion chamber

309. Volume minimum d'une chambre de combustion dans la culasse 53.80 cm³
 Minimum volume of a combustion chamber in the cylinderhead

310. Rapport volumétrique maximum (par rapport à l'unité) 8.8 : 1
 Maximum compression ratio (in relation with the unit)

311. Hauteur minimum du bloc-cylindres 401.0 mm
 Minimum height of the cylinder block



313. Chemises b) Matériau Cast-iron
 Sleeves Material

317. Piston a) Matériau Aluminum alloy
 Piston Material

b) Nombre de segments 3 c) Poids minimum 548 g
 Number of rings Minimum weight

d) Distance de la médiane de l'axe au sommet du piston 33.5 ± 0.1 mm
 Distance from gudgeon pin center line to highest point of piston crown

e) Distance (+/-) entre le sommet du piston au PMH et le plan de joint du bloc-cylindre 0.5 ± 0.15 mm
 Distance (+/-) between the top of the piston at TDC and the gasket plane of the cylinderblock

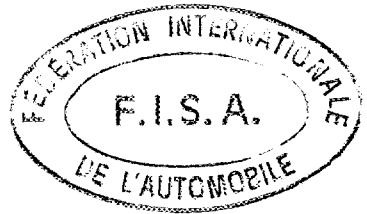
f) Volume de l'évidement du piston 5.18 ± 0.5 cm³
 Piston groove volume

319. Vilebrequin i) Diamètre maximum des manetons 52.0 mm
 Crankshaft Maximum diameter of big end journals

320. Volant moteur
 Flywheel
 c) Poids minimum avec couronne de démarreur et embrayage complet X X X X g
 Minimum weight of the flywheel with starter ring and complete clutch

321. Culasse: c) Hauteur minimum 127.0 mm
 Cylinderhead: Minimum height

d) Endroit de la mesure From top to bottom of the cylinderhead
 Where measured

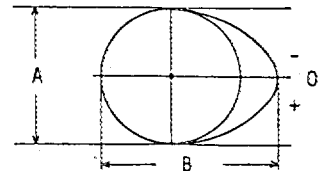


Marque Fuji Modèle BF N° Homol. N
 Make Fuji Model BF N° Homol. N

322. Epaisseur du joint de culasse serré
 Thickness of the tightened cylinderhead gasket 1.5 ± 0.2 mm

325. Arbre à cames e) Diamètre des paliers
 Camshaft Diameter of bearings F 32.0 , C 28.0 , R 28.0 mm

g) Dimensions de la came
 Cam dimensions
 Admission: A = 34.0 ± 0.1 mm
 Inlet: B = 38.9 ± 0.1 mm
 Echappement: A = 34.0 ± 0.1 mm
 Exhaust: B = 38.9 ± 0.1 mm



326. Distribution a) Jeu théorique pour la distribution
 Timing Theoretical timing clearance
 Admission Inlet 0 mm Echappement Exhaust 0 mm

b) Avance à l'ouverture (avec jeu théorique (326 a))
 Valves open at (with theoretical timing clearance (326 a))
 Admission Inlet 2 ± 1.0 avant/avant PMH Echappement Exhaust 46 ± 1.0 avant/avant PMB
 Inlet 2 ± 1.0 before/after TDC Exhaust 46 ± 1.0 before/after BDC

c) Retard à la fermeture (avec jeu théorique (326 a))
 Valves closes at (with theoretical timing clearance (326 a))
 Admission Inlet 48 ± 1.0 avant/avant PMB Echappement Exhaust 8 ± 1.0 avant/avant PMH
 Inlet 48 ± 1.0 before/after BDC Exhaust 8 ± 1.0 before/after TDC

d) Levée de came en mm (arbre démonté) (dessin/drawing art. 325)
 Cam lifts in mm (dismounted camshaft)

Admission / Inlet		Echappement / Exhaust	
$0 = 4.9 \pm 0.2$ mm		$0 = 4.9 \pm 0.2$ mm	
- 5° = 4.8 ± 0.2 mm	+ 5° = 4.8 ± 0.2 mm	- 5° = 4.8 ± 0.2 mm	+ 5° = 4.8 ± 0.2 mm
- 10° = 4.6 ± 0.2 mm	+ 10° = 4.6 ± 0.2 mm	- 10° = 4.6 ± 0.2 mm	+ 10° = 4.6 ± 0.2 mm
- 15° = 4.2 ± 0.2 mm	+ 15° = 4.1 ± 0.2 mm	- 15° = 4.3 ± 0.2 mm	+ 15° = 4.2 ± 0.2 mm
- 30° = 2.3 ± 0.2 mm	+ 30° = 1.9 ± 0.2 mm	- 30° = 2.4 ± 0.2 mm	+ 30° = 2.1 ± 0.2 mm
- 45° = 0.3 ± 0.2 mm	+ 45° = 0.3 ± 0.2 mm	- 45° = 0.4 ± 0.2 mm	+ 45° = 0.3 ± 0.2 mm
- 60° = 0 ± 0.2 mm	+ 60° = 0.1 ± 0.2 mm	- 60° = 0 ± 0.2 mm	+ 60° = 0.1 ± 0.2 mm
- 75° = 0 ± 0.2 mm	+ 75° = 0 ± 0.2 mm	- 75° = 0 ± 0.2 mm	+ 75° = 0 ± 0.2 mm
- 90° = 0 ± 0.2 mm	+ 90° = 0 ± 0.2 mm	- 90° = 0 ± 0.2 mm	+ 90° = 0 ± 0.2 mm
- 105° = 0 ± 0.2 mm	+ 105° = 0 ± 0.2 mm	- 105° = 0 ± 0.2 mm	+ 105° = 0 ± 0.2 mm
- 120° = 0 ± 0.2 mm	+ 120° = 0 ± 0.2 mm	- 120° = 0 ± 0.2 mm	+ 120° = 0 ± 0.2 mm
- 135° = 0 ± 0.2 mm	+ 135° = 0 ± 0.2 mm	- 135° = 0 ± 0.2 mm	+ 135° = 0 ± 0.2 mm
- 150° = 0 ± 0.2 mm	+ 150° = 0 ± 0.2 mm	- 150° = 0 ± 0.2 mm	+ 150° = 0 ± 0.2 mm



Marque
Make

Fuji

Modèle
Model

BC

N° Homol.

N-5421

N

e) Levée de soupape en mm avec jeu théorique de distribution (art. 326 a)
Valve lift in mm with theoretical timing clearance (art. 326 a)

Admission / Inlet

Echappement / Exhaust

Art. 326 b) = 4

avant/après PMH	before/after TDC = 0,0 mm
+ 20°	= 0.6 ± 0.2 mm
+ 40°	= 2.5 ± 0.2 mm
+ 60°	= 4.8 ± 0.2 mm
+ 80°	= 6.5 ± 0.2 mm
+ 100°	= 7.6 ± 0.2 mm
+ 120°	= 7.9 ± 0.2 mm
+ 140°	= 7.4 ± 0.2 mm
+ 160°	= 6.2 ± 0.2 mm
+ 180°	= 4.4 ± 0.2 mm
+ 200°	= 2.1 ± 0.2 mm
+ 220°	= 0.5 ± 0.2 mm
+ 240°	= 0.2 ± 0.2 mm
+ 260°	= 0.1 ± 0.2 mm
+ 280°	= 0 ± 0.2 mm
+ 300°	= 0 ± 0.2 mm
+ 320°	= 0 ± 0.2 mm
+ 340°	= 0 ± 0.2 mm
+ 360°	= 0 ± 0.2 mm

Art. 326 b) = 48

avant/après PMB	before/after BDC = 0,0 mm
+ 20°	= 0.6 ± 0.2 mm
+ 40°	= 2.5 ± 0.2 mm
+ 60°	= 4.7 ± 0.2 mm
+ 80°	= 6.4 ± 0.2 mm
+ 100°	= 7.5 ± 0.2 mm
+ 120°	= 7.9 ± 0.2 mm
+ 140°	= 7.5 ± 0.2 mm
+ 160°	= 6.4 ± 0.2 mm
+ 180°	= 4.7 ± 0.2 mm
+ 200°	= 2.6 ± 0.2 mm
+ 220°	= 0.7 ± 0.2 mm
+ 240°	= 0.2 ± 0.2 mm
+ 260°	= 0.1 ± 0.2 mm
+ 280°	= 0 ± 0.2 mm
+ 300°	= 0 ± 0.2 mm
+ 320°	= 0 ± 0.2 mm
+ 340°	= 0 ± 0.2 mm
+ 360°	= 0 ± 0.2 mm

327. Admission h) Nombre de ressorts par soupape

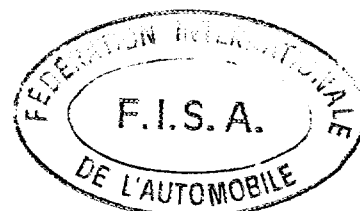
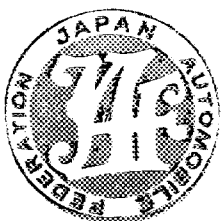
Inlet Number of springs per valve 1

i) Caractéristiques des ressorts: Sous une charge de	8.4	kg, la longueur max. du ressort est de	31.5	mm	
(in) Spring characteristics: Under a load of		kg, the max. length of the spring is		mm	
Caractéristiques des ressorts: Sous une charge de	16.6	kg, la longueur max. du ressort est de	37.5	mm	
(out) Spring characteristics: Under a load of		kg, the max. length of the spring is		mm	
k) Diamètre extérieur des ressorts	23.4 ± 0.2	mm	l) Nombre de spires des ressorts	8.15	mm
Exterior diameter of the springs			Number of spring coils		
m) Diamètre du fil des ressorts	3.4 ± 0.1	mm	n) Longueur libre maximum des ressorts	43.0	mm
Diameter of spring wire			Maximum free length of the springs		

328. Echappement

Exhaust

c) Diamètre de(s) sortie(s) du collecteur	45.6 ± 1.0	mm	i) Nombre de ressorts par soupape	1	
Diameter of the manifold exit(s)			Number of springs per valve		
k) Caractéristiques des ressorts: Sous une charge de	16.6	kg, la longueur max. du ressort est de	37.0	mm	
Spring characteristics: Under a load of		kg, the max. length of the spring is		mm	
l) Diamètre extérieur des ressorts	23.4 ± 0.2	mm	m) Nombre de spires des ressorts	8.1	
Exterior diameter of the springs			Number of spring coils		
n) Diamètre du fil des ressorts	3.4 ± 0.1	mm	o) Longueur libre maximum des ressorts	43.0	mm
Diameter of spring wire			Maximum free length of the springs		



Marque Fuji Modèle BF N° Homol. N-5421 **N**
 Make _____ Model _____

329. **Système anti-pollution** a) oui/~~non~~ **XXX**
Anti pollution system Yes/~~No~~ **XXX**
 b) Description _____
 Description _____
3 way catalitic converter with O₂ feedback

330. **Système d'allumage** d) Nombre de bobines 4
Ignition system Number of coils _____

331. **Capacité du circuit de refroidissement** 7.3 L
Cooling system capacity _____

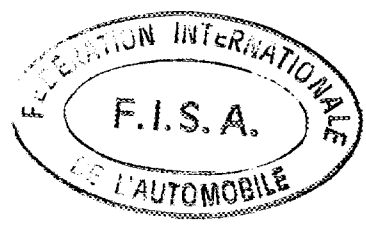
332. **Ventilateur de refroidissement** a) Nombre 1 b) Diamètre de l'hélice 350 mm
Cooling fan Number _____ Diameter of the screw _____ mm
 c) Matériau de l'hélice Polypropylène d) Nombre de pales 5
 Material of the screw _____ Number of blades _____
 e) Type de connexion Electrical f) Ventilateur débrayable oui/~~non~~ **XXX**
 Type of connection _____ Automatic cut in yes/~~no~~ **XXX**

333. **Système de lubrification** c) Capacité totale 5.3 L
Lubrication system Total capacity _____ L
 d) Radiateur(s) d'huile oui/~~non~~ **XXX** Nombre 1
 Oil radiator(s) yes/~~no~~ **XXX** Number _____
 e) Emplacement du/des radiateurs Between the cylinder block and the oil filter
 Position of the radiator(s) _____

4. CIRCUIT DE CARBURANT / FUEL CIRCUIT

401. **Réservoir** e) Emplacement des orifices Rearward on the righthand
Fuel tank Filler holes location _____

402. **Pompe(s) à essence** a) Electrique Mécanique
Fuel pump(s) Electrical Mecanical
 b) Nombre 1 c) Marque et type Make: NIHONDENSHIKIKI
 Number _____ Make and type Type: Electrical
 d) Emplacement In the fuel tank e) Débit maximum 3.17 l/mn
 Location _____ Maximum flow _____ l/mn



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5. EQUIPEMENT ELECTRIQUE / ELECTRICAL EQUIPEMENT

501. Batterie(s) b) Tension 12 V c) Emplacement
 Battery(ies) Tension 12 V Location In the engine compartment

502. Génératrice(s) a) Nombre 1
 Generator(s) Number 1
 b) Type Alternator c) Système d'entraînement Belt
 Type Alternator Drive system Belt

503. Phares escamotables: a) ~~X~~/non b) Système de commande X X X X
 Retractable headlights: ~~X~~/no Drive system X X X X

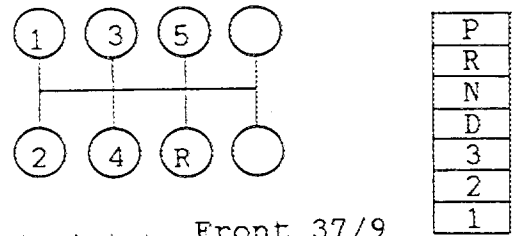
6. TRANSMISSION / DRIVE

602. Embrayage a) Type Dry d) Diamètre du(des) disque(s)
 Clutch Type Dry Diameter of the plate(s) 225 ± 2.0 mm

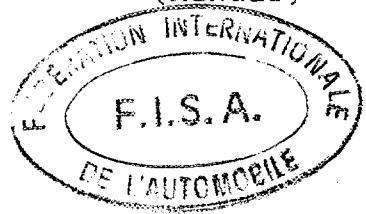
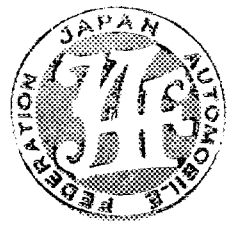
603. Boîte de vitesse
 Gearbox
 e) rapports ratios

	Manuelle / Manual			Automatique / Automatic		
	rappports ratio	nombre de dents/ number of teeth	synchro.	rappports ratio	nombre de dents/ number of teeth	synchro.
1	3.545	39/11	X	2.785	$1 + \frac{75}{42}$	
2	2.111	38/18	X	1.545	$\frac{75/33 + 75/42 + 1}{75/33 + 1}$	
3	1.448	42/29	X	1.000	—	
4	1.088	37/34	X	0.694	$\frac{75/33}{75/33 + 1}$	
5	0.825	33/40	X	—	—	
AR/R	3.416	41/12		2.272	75/33	
Constante	—	—		1.000	47/47	
Const.	—	—		—	—	

f) Grille de vitesse
 Gear change gate



605. Couple final b) Rapport Front 4.111 c) Nombre de dents Front 37/9
 Final drive Ratio Rear 4.111 Number of teeth Rear 37/9
 (Manual) (Manual)



Marque Fuji
 Make _____

Modèle BF
 Model _____

N° Homol. _____ **N-5421**

7. SUSPENSION / SUSPENSION

**702. Ressorts hélicoïdaux
 Helical springs**

- a) Matériau
Material
- b) Type progressif
Progressive type
- c) Longueur libre minimale
Minimal free length
- d) Nombre de spires
Number of coils
- e) Diamètre du fil
Diameter of the wire
- f) Diamètre extérieur
Exterior diameter

AV / Front	AR / Rear
Steel	Steel
XXXXXX	XXXXXX
XXXXXX	XXXXXX
X X X X _____ mm	X X X X _____ mm
X X X X _____ mm	X X X X _____ mm
X X X X _____ mm	X X X X _____ mm
X X X X _____ mm	X X X X _____ mm

g) Caractéristiques des ressorts: Sous une charge de XXX kg, la longueur min. du ressort AV est de XXX mm
 Spring characteristics: Under a load of XXX kg, the min. length of the front spring is XXX mm
 Sous une charge de XXX kg, la longueur min. du ressort AR est de XXX mm
 Under a load of XXX kg, the min. length of the rear spring is XXX mm

**703. Ressorts à lames
 Leaf springs**

A = Lame maîtresse / X = lame auxiliaire
 2 = 2^e lame / 3 = 3^e lame / 4 = 4^e lame / 5 = 5^e lame

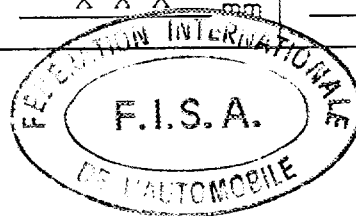
A = major leaf / X = auxiliary leaf
 2 = 2nd leaf / 3 = 3rd leaf / 4 = 4th leaf / 5 = 5th leaf

- a) Matériau
Material
- b) Nombre d'étriers
Number of spring hangers
- c) Longueur libre minimum
Minimum free length
- d) Largeur maximum
Maximum width
- e) Epaisseur
Thickness
- f) Courbure verticale maximale
Maximum vertical curve

A	2	3
X X X _____	X X X _____	X X X _____
X X X _____	X X X _____	X X X _____
X X X _____ mm	X X X _____ mm	X X X _____ mm
X X X _____ mm	X X X _____ mm	X X X _____ mm
X X X _____ mm	X X X _____ mm	X X X _____ mm
X X X _____ mm	X X X _____ mm	X X X _____ mm

- a) Matériau
Material
- b) Nombre d'étriers
Number of spring hangers
- c) Longueur libre minimum
Minimum free length
- d) Largeur maximum
Maximum width
- e) Epaisseur
Thickness
- f) Courbure verticale maximale
Maximum vertical curve

4	5	X
X X X _____	X X X _____	X X X _____
X X X _____	X X X _____	X X X _____
X X X _____ mm	X X X _____ mm	X X X _____ mm
X X X _____ mm	X X X _____ mm	X X X _____ mm
X X X _____ mm	X X X _____ mm	X X X _____ mm
X X X _____ mm	X X X _____ mm	X X X _____ mm



Marque fuji
 Make _____

Modèle BF
 Model _____

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704. Barre de torsion
Torsion bar

- a) Longueur efficace
 Effective length
 mesurée de:
 measured from:
 à:
 to:
- b) Diamètre efficace
 Effective diameter
 mesuré à:
 measured at:
- c) Matériau
 Material

AV / Front	AR / Rear
<u>X X X</u> mm	<u>X X X</u> mm
<u>X X X</u>	<u>X X X</u>
<u>X X X</u>	<u>X X X</u>
<u>X X X</u> mm	<u>X X X</u> mm
<u>X X X</u>	<u>X X X</u>
<u>X X X</u>	<u>X X X</u>

706. Stabilisateur
Stabilizer

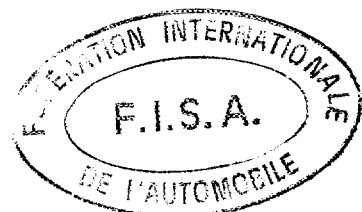
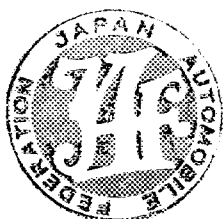
- a) Longueur efficace
 Effective length
- b) Diamètre efficace
 Effective diameter
- c) Matériau
 Material

AV / Front	AR / Rear
<u>1,066.4 ± 1%</u> mm	<u>1,136.0 ± 1%</u> mm
<u>18.0</u> mm	<u>18.0</u> mm
<u>Steel</u>	<u>Steel</u>

707. Amortisseurs
Shock absorbers

- d) Diamètre extérieur
 Exterior diameter
- e) Assiette du ressort réglable
 Adjustable spring trim
~~Yes~~/no
~~Yes~~/no
- f) Distance assiette-fixation
 Distance trim-monitoring
- g) Diamètre de la tige de piston
 Diameter of the piston rod

AV / Front	AR / Rear
<u>X X X X</u> mm	<u>X X X X</u> mm
Yes /no Yes /no	Yes /no Yes /no
<u>X X X X</u> mm	<u>X X X X</u> mm
<u>X X X X</u> mm	<u>X X X X</u> mm



8. TRAIN ROULANT / RUNNING GEAR

**801. Roues
Wheels**

- a) Diamètre
Diameter
- b) Largeur
Width
- c) Marque et type
Make and type
- d) Matériau
Material
- e) Poids unitaire
Unitary weight
- f) Dépot entre plan de montage
et extrémité intérieure
Offset between mounting
and extreme inner face

AV / Front	AR / Rear	Secours / Spare
15 ..	15 ..	15 ..
<u>381</u> mm	<u>381</u> mm	<u>381</u> mm
6 ..	6 ..	6 ..
<u>152</u> mm	<u>152</u> mm	<u>152</u> mm
X X X X	X X X X	X X X X
X X X X	X X X X	X X X X
X X X X kg	X X X X kg	X X X X kg
X X X X mm	X X X X mm	X X X X mm

802. Emplacement de la roue de secours Behind the rear seat
 Location of the spare wheel _____

9. CARROSSERIE / BODYWORK

**901. Intérieur
Interior**

c) Climatisation ~~XX~~/non
 Air conditioning ~~YES~~/no

- d) Sièges
Seats
- d1) Type
Type
- d2) Appuie-tête
Headrest
- d3) Poids
Weight

AR / Rear	AV / Front
<u>Bench</u>	<u>Separate</u>
oui /non yes /no	oui/ XX yes/ XX
<u>10.2 ±1.0</u> kg	<u>13.5 ±1.0</u> kg

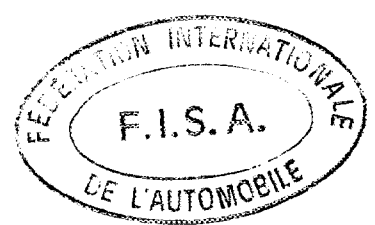
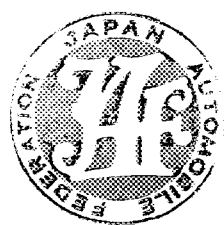
d4) Siège AR rabattable ~~XX~~/non
 Car rear seat be folded ~~YES~~/no

e) Plage arrière oui/~~XX~~
 Rear ledge yes/~~XX~~

e1) Matériau Cloth
 Material _____

**902. Extérieur
Exterior**

n) Essuie-glace AR ~~XX~~/non
 Rear wiper ~~YES~~/no



PHOTOS / PHOTOS

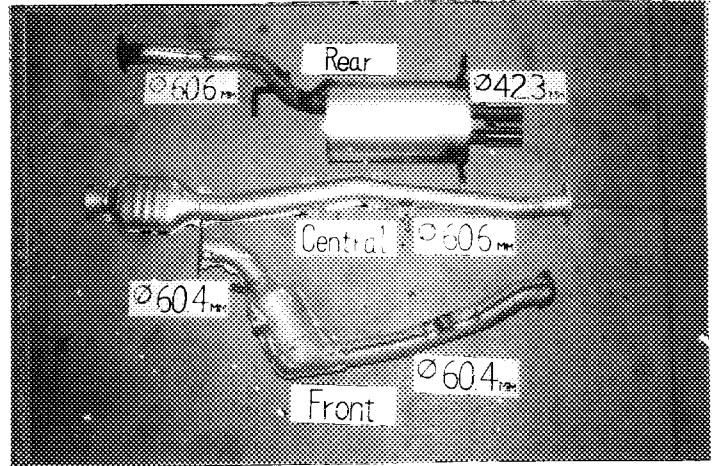
Moteur / Engine

AA) Piston de profil
Piston profile



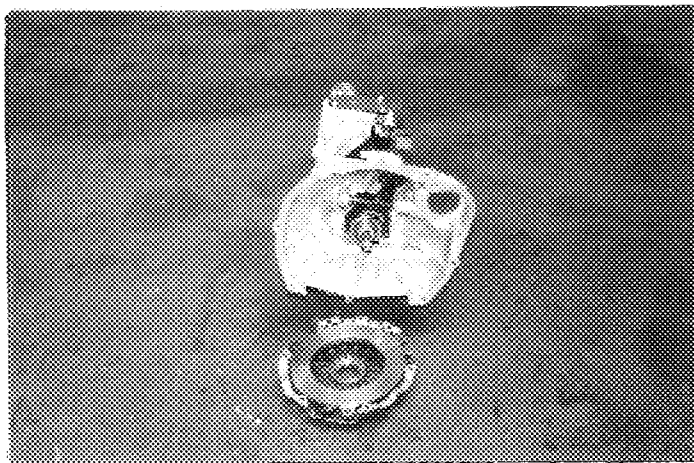
BB) Echappement complet
Complete exhaust system

Tolerance : ±5%



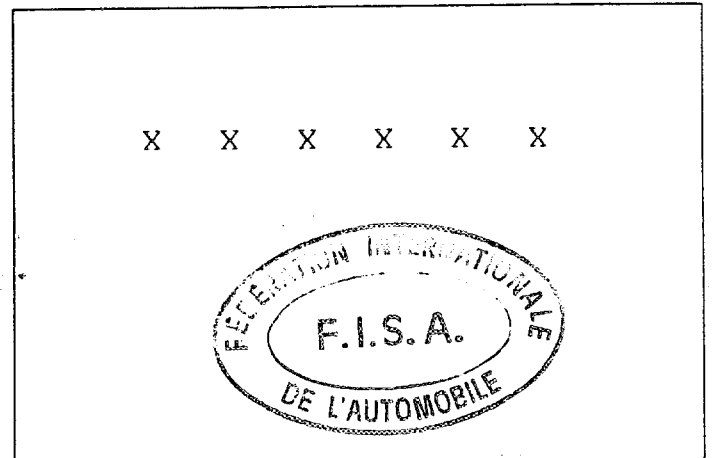
Transmission / Transmission

CC) Embrayage complet
Complete clutch

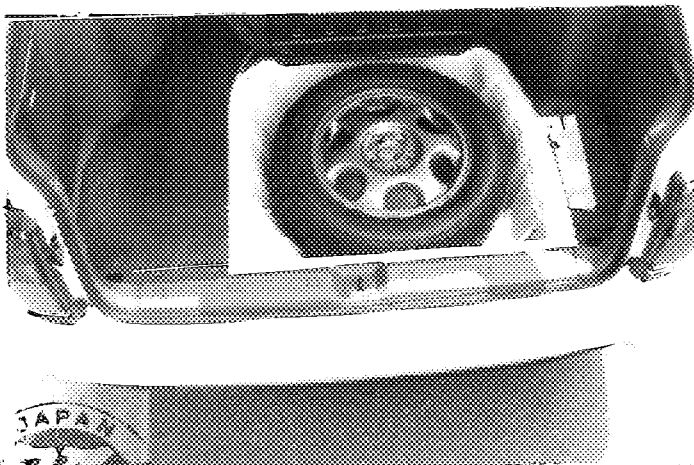


Train roulant / Running gear

DD) Roue nue (vue de 3/4)
Bare wheel (3/4 view)



EE) Roue de secours dans son emplacement
Spare wheel in its location



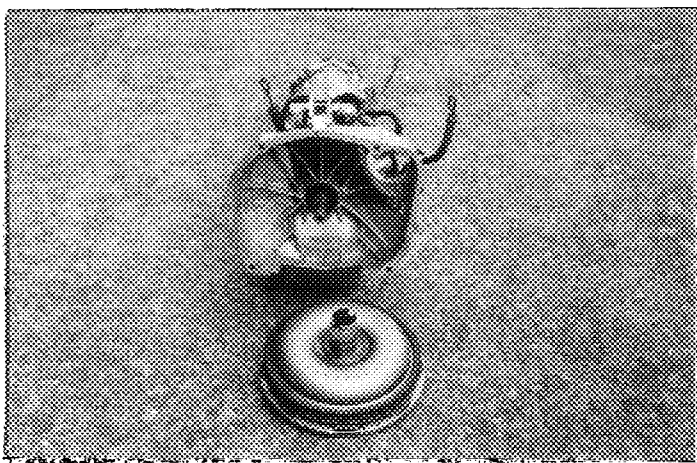
Carrosserie / Bodywork

FF) Siège démonté avec ses accessoires
Dismounted seat with its accessories

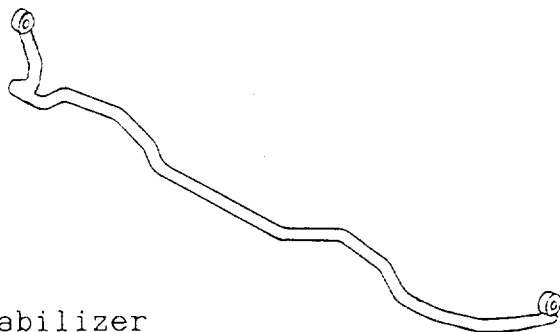


COMPLEMENTARY INFORMATION

- (1) 605 Final drive of automatic gear-box
 Ratio : 4.444
 Number of teeth : 40/9
- (2) Standard pressure of supercharging : 0.55 ±0.08 bar
 Measuring pressure system : Pressure
 Corresponding to an axial displacement of the wastgate control rod of : 4.5 ±0.5 mm
- (3) Photo CC) Complete clutch of automatic gear-box



- (4) 706 Drawing of the stabilizer
 Front stabilizer



Rear stabilizer

