



A-5547

Groupe A/B

FICHE D'HOMOLOGATION CONFORME A L'ANNEXE J DU CODE SPORTIF INTERNATIONAL

01 JAN. 1996

Homologation valable à partir du

A) Voiture vue de 3/4 avant

B) Voiture vue de 3/4 arrière



1. GENERALITES / GENERAL

101. Constructeur USAHASAMA PROTON-DRB SDN BHD (USPD)
102. Dénomination(s) commerciale(s) - Modèle et type PROTON SATRIA 1.6GLi
103. Cylindrée 1597,4 cm3 Cylindrée corrigée X X X X X X X X = X X X X cm3
104. Mode de construction : a) Mode : ~~séparé~~ monocoque
105. Nombre de volumes 2 106. Nombre de places 5

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8, place de la Concorde, 75008 Paris
Services Administratifs :
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Marque
Make

USAHASAMA PROTON-DRB
SDN BHD (USPD)

Modèle
Model

PROTON Satria 1.6GLi

Homologation

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2. DIMENSIONS, POIDS / DIMENSIONS, WEIGHT

202. Longueur hors-tout / Overall length 3955 mm +/- 1 %
203. Largeur hors-tout / Overall width 1690 mm +/- 1 %
- Endroit de mesure / Where measured At Front Axle
204. Largeur de carrosserie / Width of bodywork
- a) A la hauteur de l'axe avant / At front axle 1690 mm +/- 1 %
 - b) A la hauteur de l'axe arrière / At rear axle 1680 mm +/- 1 %
206. Empattement / Wheelbase 2440 mm +/- 1 %
209. Porte-à-faux / Overhang
- a) Avant / Front 820 mm +/- 1 %
 - b) Arrière / Rear 695 mm +/- 1 %
210. Distance "G" (volant - paroi de séparation arrière) / Distance "G" (steering wheel - rear bulkhead) 1470 mm

Marque USAHASAMA PROTON-DRB
 Make SDN BHD (USPD)

Modèle PROTON SATRIA 1.6GLi
 Model PROTON SATRIA 1.6GLi

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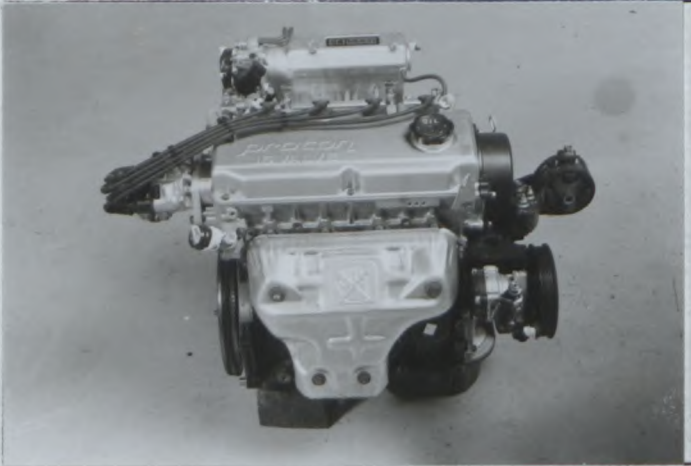
3. MOTEUR / ENGINE

(en cas de moteur rotatif, voir Art. 335 sur fiche additionnelle)
(in case of rotative engine, see Art. 335 on additional form)

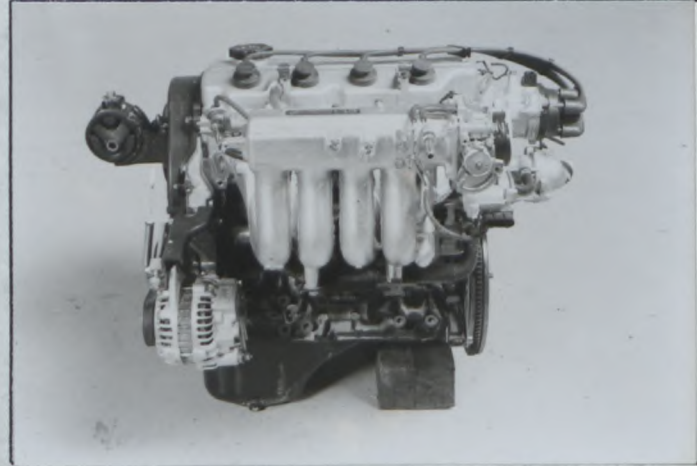
301. Emplacement et position du moteur Inclination (R/L) : 0°
 Location and position of the engine Front, Lateral, Vertical Angle : 10°

303. Cycle 4 Otto
 Cycle

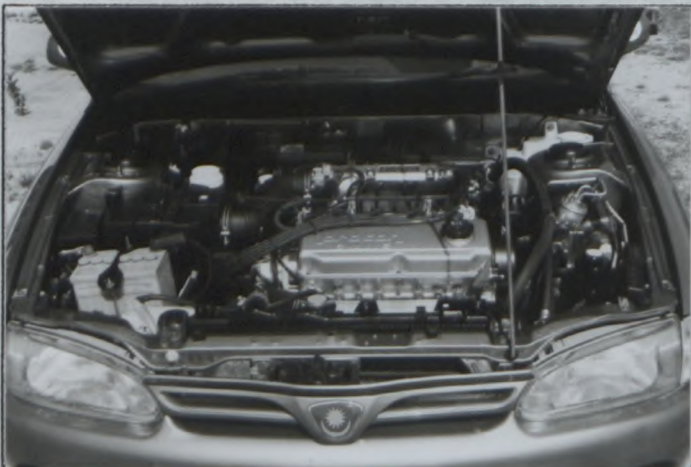
C) Profil droit du moteur déposé
 Right hand view of dismantled engine



D) Profil gauche du moteur déposé
 Left hand view of dismantled engine



E) Moteur dans son compartiment
 Engine in its compartment



304. Suralimentation

oui	non
yes	no

 Supercharging

(en cas de suralimentation, voir Art. 334 sur fiche additionnelle)
(in case of supercharging, see Art. 334 on additional form)

Type et nombre de compresseurs X X X X
 Type and number of compressors

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Modèle PROTON SATRIA 1.6GLi
 Model

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305. Nombre et disposition des cylindres
 Number and layout of cylinders 4 In-Line

306. Mode de refroidissement
 Type of cooling Liquid

307. Cylindrée
 Cylinder capacity a) Unitaire 399.25 cm³ b) Totale 1597,4 cm³
 Unitary Total

c) Totale max. autorisée 1599,4 cm³
 Max. total allowed

INDICATION NON VALABLE EN GROUPE N
 NOT VALID FOR GROUP N

312. Matériau du bloc-cylindre
 Cylinder block material Cast Iron

313. Chemises :
 Sleeves : a)

oui	non
yes	no

c)

humides	sec
wet	dry

314. Alésage
 Bore ø 81.0 mm

315. Alésage maximum autorisé
 Maximum bore allowed ø 81.05 mm

INDICATION NON VALABLE EN GROUPE N
 NOT VALID FOR GROUP N

316. Course
 Stroke 77.5 mm

318. Bielle :
 Connecting rod : a) Matériau Steel b) Type de la tête de bielle Separate
 Material Big end type

c) Diamètre intérieur de la tête de bielle (sans coussinets)
 Interior diameter of the big end (without shell bearings) ø 48.0 mm

d) Longueur entre axes 120.0 +/- 0.1 mm e) Poids minimum 430 g
 Length between the axes Minimum weight

319. Vilebrequin
 Crankshaft a) Type de construction One Piece
 Type of manufacture

b) Matériau Steel c)

coulé	forgé
cast	forged

 d) Nombre de paliers 5
 Material Number of bearings

e) Type de paliers Plain f) Diamètre des paliers ø 50.0 mm
 Type of bearings Diameter of bearings

g) Matériau des chapeaux de paliers Cast-iron h) Poids minimum du vilebrequin nu 12400
 Bearing caps material Minimum weight of bare crankshaft

320. Volant moteur :
 Flywheel :

a) Matériau
 Material
 b) Poids minimum avec couronne de démarreur
 Minimum weight with starter ring

	Boîte manuelle/Manual gearbox	Boîte automatique/Automatic gearbox
a) Matériau Material	<u>Cast iron</u>	<u>X X X X</u>
b) Poids minimum avec couronne de démarreur Minimum weight with starter ring	<u>6600</u> g	<u>X X X X</u> g
		Utilisable uniquement avec boîte de vitesses automatique Only usable with an automatic gearbox

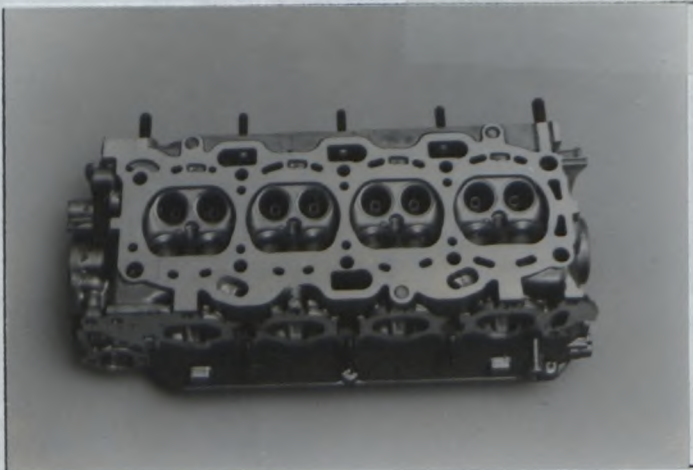
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 Make SDN BHD (USPD)

Modèle PROTON Satria 1.6GLi
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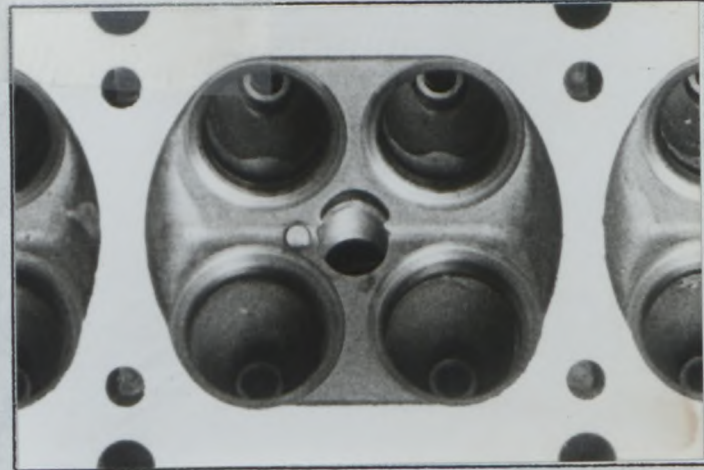
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321. Culasse : a) Nombre 1 b) Matériau Aluminium Alloy
 Cylinderhead : Number Material
- e) Angle entre soupape d'admission et la verticale 28.5°
 Angle between intake valve and vertical
- f) Angle entre soupape d'échappement et la verticale 20.0°
 Angle between exhaust valve and vertical

F) Culasse nue
 Bare cylinderhead

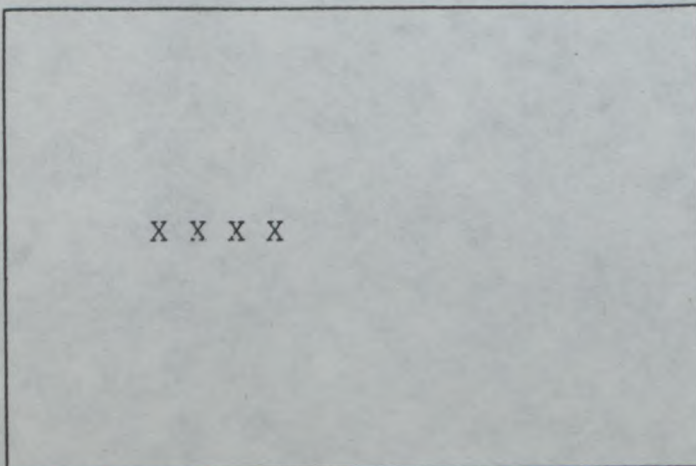


G) Chambre de combustion
 Combustion chamber



323. Alimentation par carburateur : a) Nombre de carburateurs X X X X
 Fuel feed by carburettor : Number of carburetors
- b) Type X X X X c) Marque et modèle X X X X
 Type Make and model
- d) Nombre de passages de gaz par carburateur X X X X
 Number of mixture passages per carburettor
- e) Diamètre maximum de la sortie de gaz du carburateur X X X X mm
 Maximum diameter of the carburettor mixture exit port
- f) Diamètre du diffuseur au point d'étranglement maximum X X X X +/- 0.25 mm
 Diameter of the venturi at the narrowest point

H) Carburateur(s)
 Carburettor(s)



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USAHASAMA PROTON-DRB
 Marque SDN BHD (USPD)
 Make

PROTON PERSONA COMPACT 1.6GLi
 Modèle PROTON SATRIA 1.6GLi
 Model

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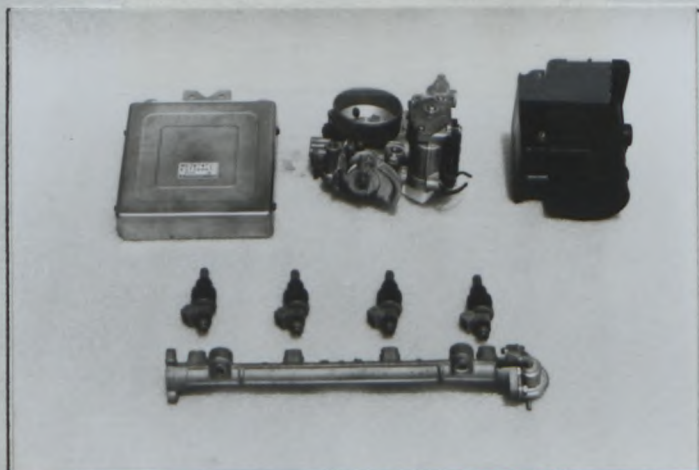
324. Alimentation par injection : a) Marque MITSUBISHI b) Modèle ECI-MULTI
 Fuel feed by injection : Make Model
- c) Mode de dosage du carburant :

mécanique	électronique	hydraulique
mechanical	electronic	hydraulic

 Kind of fuel measurement :
- d) Dimensions du conduit d'admission au niveau du papillon ou de la guillotine ∅ 50.0 +/- 0.25 mm
 Dimensions of intake pipe at the throttle or slide location
- e) Nombre de sorties effectives de carburant 4
 Number of effective fuel outlets
- f) Position des injecteurs
 Position of injectors
- f1)

Collecteur	Culasse
Manifold	Cylinderhead
- g) Capteurs du système d'injection Water temperature sensor, air temperature sensor,
 Sensors of injection system
Pressure sensor, Throttle position sensor, Karman vortex type Air
flow meter, Crank angle sensor, Cam angle sensor, Knock sensor
(Oxygen sensor fitted to PERSONA COMPACT
- h) Actionneurs du système d'injection Injectors, Pressure regulator
 Actuators of injection system

H) Système d'injection
 Injection system



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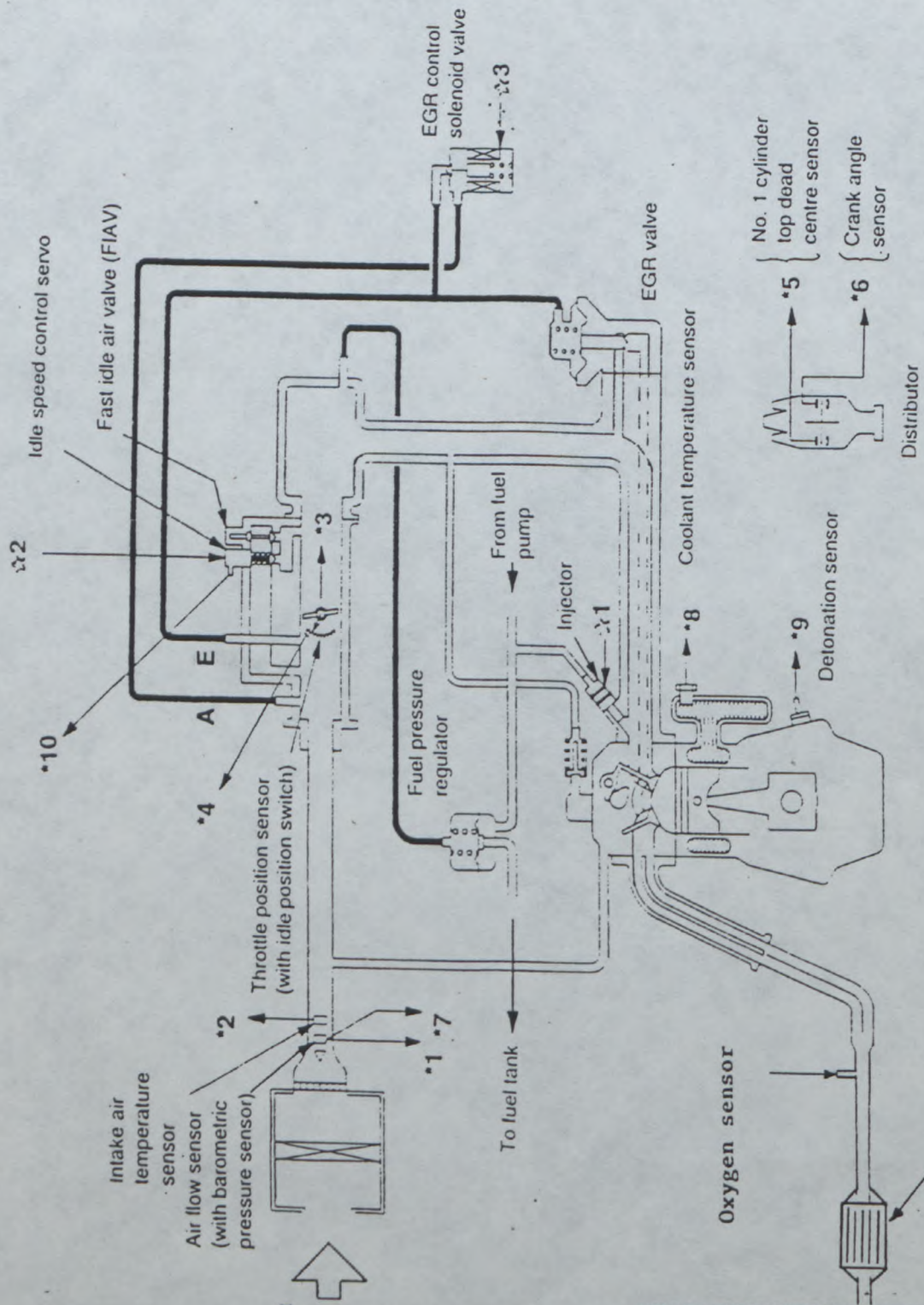
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Marque
Make

Modèle
Model

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XIV) LOCALISATION DES CAPTEURS ET ACTIONNEURS / LOCATION OF SENSORS AND ACTUATORS :



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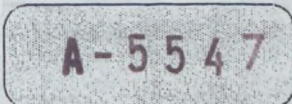
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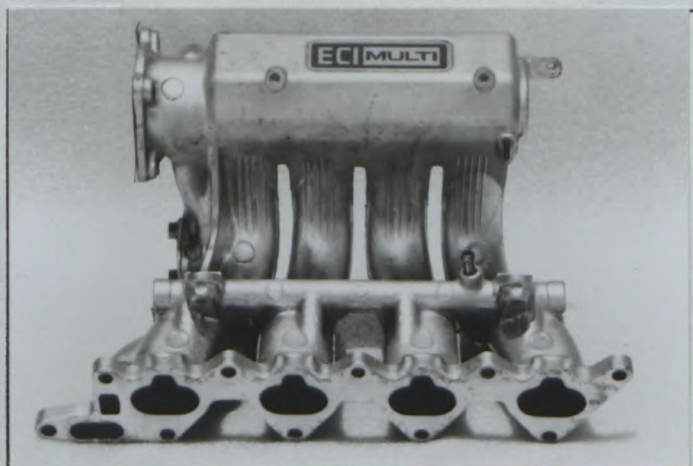
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3-way Catalyst
Persona Compact 1.6GLi only



325. Arbre à cames : a) Nombre 1 b) Emplacement TOP (SOHC)
 Camshaft : Number Location
- c) Système d'entraînement Notched Belt d) Nombre de paliers par arbre 5
 Drive system Number of bearings per shaft
- f) Système de commande de soupapes Rocker Arm
 Type of valve operation
327. Admission : a) Matériau du collecteur Aluminium Alloy
 Intake : Material of manifold
- b) Nombre d'éléments du collecteur 1 c) Nombre de soupapes par cylindre 2
 Number of manifold elements Number of valves per cylinder
- d) Diamètre maximum de soupape ∅ 30.2 mm e) Diamètre de tige de soupape dans guide ∅ 6.15 +0/-0.2 mm
 Maximum diameter of the valve Diameter of the valve stem in guide
- f) Longueur de soupape 110.15 +/- 1.5 mm g) Type des ressorts de soupape Helical
 Valve length Type of valve springs
328. Echappement : a) Matériau du collecteur Cast-iron
 Exhaust : Material of manifold
- b) Nombre d'éléments du collecteur 1 c) Dimensions intérieures de sortie collecteur ∅ 44.0 ± 2.0 mm
 Number of manifold elements Internal dimensions of manifold exit
- d) Nombre de soupapes par cylindre 2 e) Diamètre maximum de soupape ∅ 27.2 mm
 Number of valves per cylinder Maximum diameter of the valve
- f) Diamètre de tige de soupape dans guide ∅ 6.15 +0/-0.2 mm g) Longueur de soupape 113.7 +/-1.5 mm
 Diameter of the valve stem in guide Valve length
- h) Type des ressorts de soupape Helical
 Type of valve springs

I) Collecteur d'admission
 Intake manifold



J) Collecteur d'échappement
 Exhaust manifold



∅ 44 ± 2.0mm.

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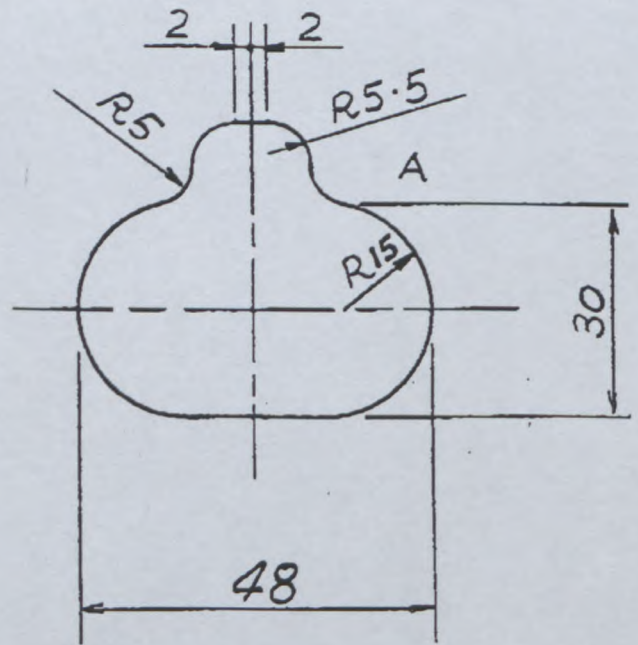
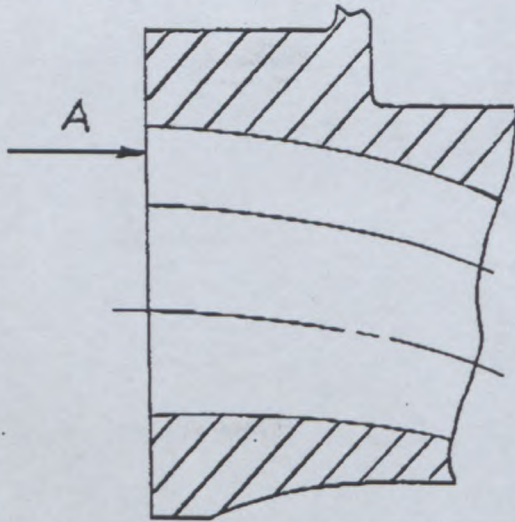
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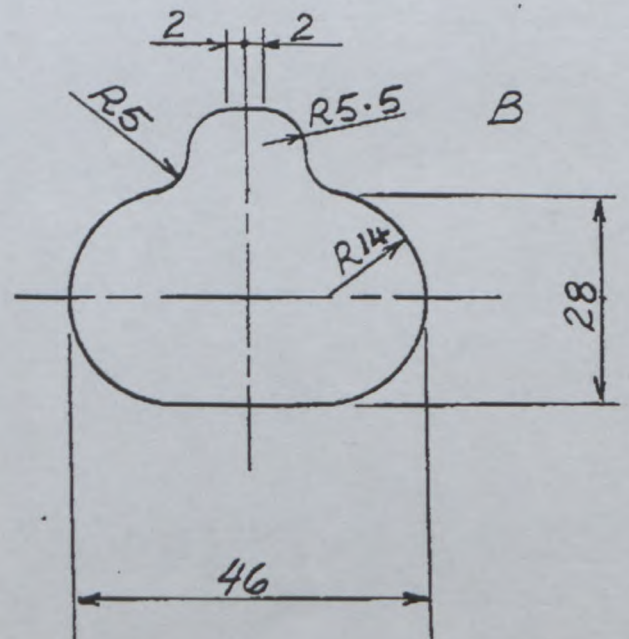
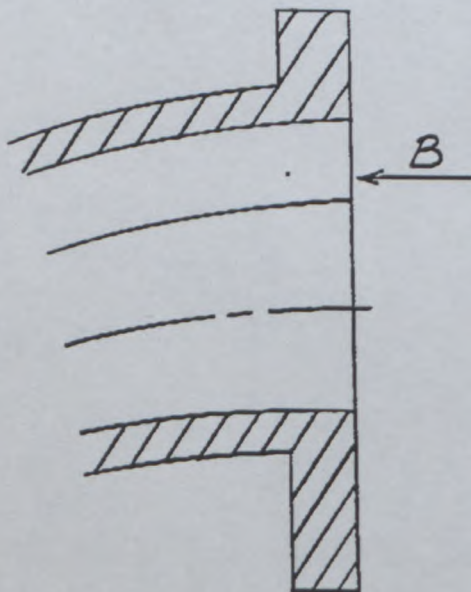
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Dessins des orifices du moteur - tolérances sur les dimensions : -2%, +4%
Drawings of engine ports - tolerances on dimensions : -2%, +4%

I) Culasse, face collecteur / Cylinderhead, manifold side

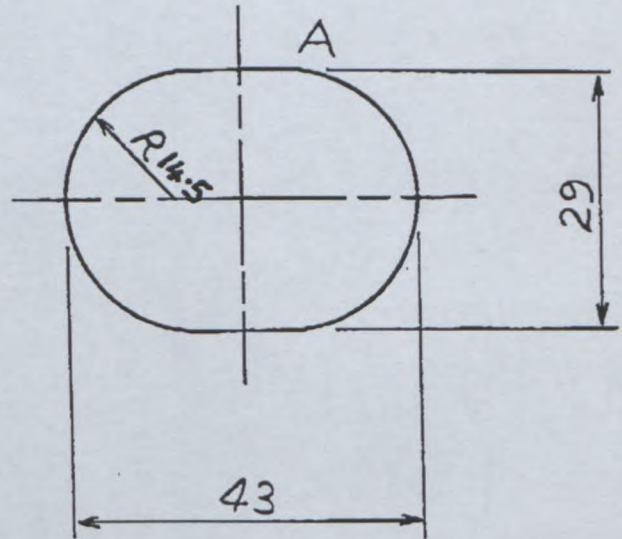
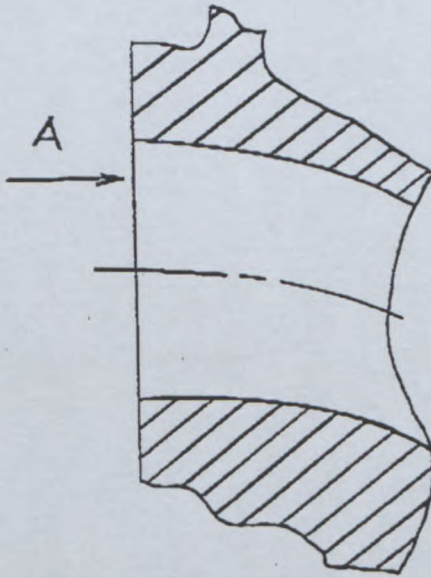


II) Collecteur, côté culasse / Manifold, cylinderhead side

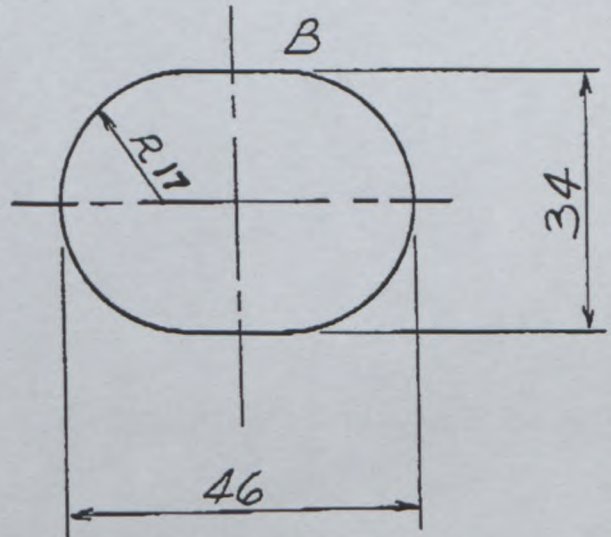
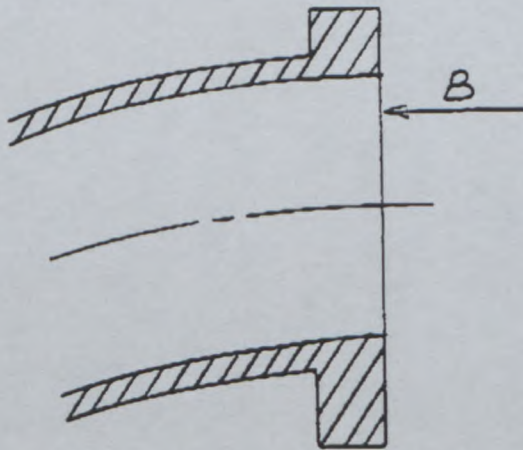


Dessins des orifices du moteur - tolérances sur les dimensions : -2%, +4%
Drawings of engine ports - tolerances on dimensions : -2%, +4%

III) Culasse, face collecteur / Cylinderhead, manifold side



IV) Collecteur, côté culasse / Manifold, cylinderhead side



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PROTON Satria 1.6GLi
 Modèle
 Model

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330. Système d'allumage :
 Ignition system :

b) Nombre de bougies par cylindre 1
 Number of plugs per cylinder

c) Nombre de distributeurs 1
 Number of distributors

333. Système de lubrification :
 Lubrication system :

a) Type Wet Sump
 Type

b) Nombre de pompes à huile 1
 Number of oil pumps

USAHASAMA PROTON-DRB
SDN BHD (USPD)

PROTON PROTON NA COL 1.6GLi

Homologation No

Marque
Make

Modèle
Model

PROTON SATRIA 1.6GLi

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4. CIRCUIT DE CARBURANT / FUEL CIRCUIT

401. Réservoir : a) Nombre 1
Fuel tank : Number

b) Emplacement Under the rear seat
Location

c) Matériau Steel
Material

5. EQUIPEMENT ELECTRIQUE / ELECTRICAL EQUIPMENT

501. Batteries : a) Nombre 1 b) Tension 12 volts
Batteries : Number Tension

6. TRANSMISSION / POWER TRAIN

601. Roues motrices : avant

oui	non
yes	no

 arrière

oui	non
yes	no

Driven wheels : front rear

602. Embrayage : b) Système de commande Hydraulic c) Nombre de disques 1
Clutch : Control system Number of plates

603. Boîte de vitesses : a) Emplacement Engine Compartment of the car
Gearbox : Location

b) Marque "manuelle" MITSUBISHI c) Marque "automatique" X X X X
"Manual" make "Automatic" make

d) Type et emplacement de commande Mechanical, on floor
Type and location of control

Marque USAHASAMA PROTON-DRB
 Make SDN BHD (USPD)

Modèle PROTON Satria 1.6GLi
 Model PROTON Satria 1.6GLi

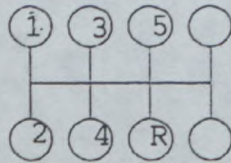
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e) Rapports Ratios

	Manuelle Manual			
	nombre de dents number of teeth	rapport ratio	constant	synchro
1	37/12	3.083	X	X
2	37/19	1.947	X	X
3	36/28	1.285	X	X
4	31/33	0.939	X	X
5	28/37	0.756	X	X
6	-	-	-	-
AR / R	37/12	3.083	X	
Constante Constant	34/31	1.096		

	Automatique Automatic		
	nombre de dents number of teeth	rapport ratio	synchro
1			
2			
3			
4			
5			
AR/R			

f) Grille de vitesses
 Gear change gate



g) Type de lubrification By Splash
 Type of lubrication

S) Carter de boîte de vitesses et cloche d'embrayage
 Gearbox casing and clutch bell housing



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Marque
Make

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604. Boîte de transfert / différentiel central : a) Rappports X X X X
Transfer box / central differential : Ratios
- b) Nombres de dents X X X X
Numbers of teeth
- c) Système de commande de boîte de transfert X X X X
Control system of transfer box
- d) Type de différentiel central X X X X
Type of central differential

605. Couple final
Final drive

	Avant / Front	Arrière / Rear
a) Type de couple final Type of final drive	Helical Gear	X X X X
b) Rapport Ratio	3.941	X X X X
c) Nombre de dents Number of teeth	67/17	X X X X
e) Type de lubrification Type of lubrication	Oil Bath	X X X X

606. Arbres : a) Type des arbres longitudinaux X X X X
Shafts : Type of longitudinal shafts
- b) Matériau des arbres longitudinaux X X X X
Material of longitudinal shafts
- c) Type des demi-arbres transversaux Ball joint + Tripod joint
Type of transversal half-shafts
- d) Matériau des demi-arbres transversaux Steel
Material of transversal half-shafts

XII) CHAINE CINEMATIQUE (4 roues motrices) / KINEMATIC TRAIN (4 wheel drive) :

X X X X

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PROTON Satria 1.6GLi
 Modèle Model PROTON SATRIA 1.6GLi

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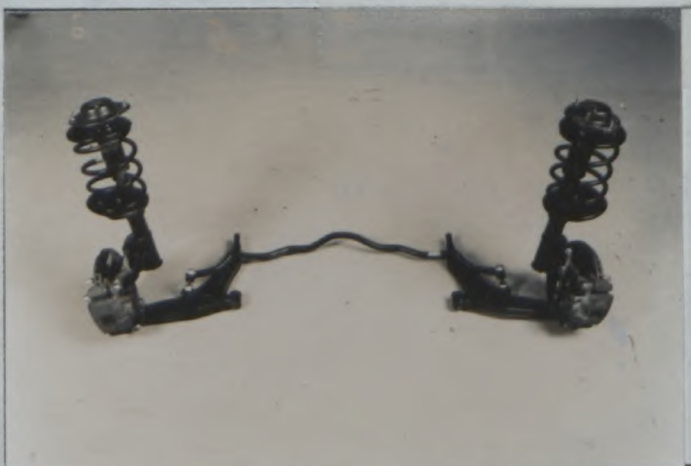
7. SUSPENSION / SUSPENSION

	Avant / Front	Arrière / Rear								
701. Généralités General	Independent McPherson with Coil spring	Independent Multi link with trailing arm and coil spring								
a) Type de suspension Type of suspension										
702. Ressorts hélicoïdaux Helicoïdal springs	<table border="1"> <tr><td>oui</td><td>non</td></tr> <tr><td>yes</td><td>no</td></tr> </table>	oui	non	yes	no	<table border="1"> <tr><td>oui</td><td>non</td></tr> <tr><td>yes</td><td>no</td></tr> </table>	oui	non	yes	no
oui	non									
yes	no									
oui	non									
yes	no									
703. Ressorts à lames Leaf springs	<table border="1"> <tr><td>oui</td><td>non</td></tr> <tr><td>yes</td><td>no</td></tr> </table>	oui	non	yes	no	<table border="1"> <tr><td>oui</td><td>non</td></tr> <tr><td>yes</td><td>no</td></tr> </table>	oui	non	yes	no
oui	non									
yes	no									
oui	non									
yes	no									
704. Barres de torsion Torsion bars	<table border="1"> <tr><td>oui</td><td>non</td></tr> <tr><td>yes</td><td>no</td></tr> </table>	oui	non	yes	no	<table border="1"> <tr><td>oui</td><td>non</td></tr> <tr><td>yes</td><td>no</td></tr> </table>	oui	non	yes	no
oui	non									
yes	no									
oui	non									
yes	no									

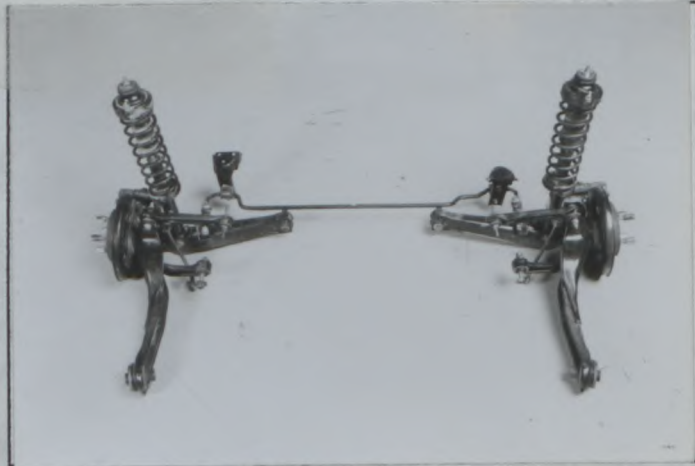
705. Autre type de suspension :
 Other type of suspension : *Voir description sur fiche additionnelle*
See description on additional form

	Avant / Front	Arrière / Rear
707. Amortisseurs : Shock absorbers :		
a) Nombre par roue Number per wheel	<u>1</u>	<u>1</u>
b) Type Type	Telescopic	Telescopic
c) Principe de fonctionnement Principle of operation	Hydraulic	Hydraulic

T) Train avant complet déposé
 Complete dismantled front axle



U) Train arrière complet déposé
 Complete dismantled rear axle



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8. TRAIN ROULANT / RUNNING GEAR

	Avant / Front	Arrière / Rear
801. Roues : Wheels :		
a) Diamètre Diameter	14 " / \varnothing 355.6 mm	14 " / \varnothing 355.6 mm

803. Freins : Brakes :	a) Système de freinage Braking system	Hydraulic
b) Nombre de maître-cylindres Number of master cylinders	Tandem	b1) Alésages Bores \varnothing 22.22 mm / \varnothing 22.22 mm
c) Servo-frein Servo-brakes	oui non yes no	c1) Marque et type Make and type JIDOSHAKIKI, Vacuum
d) Régulateur de freinage Braking regulator	oui non yes no	d1) Emplacement Location Under the master cylinder in the engine compartment.

	Avant / Front	Arrière / Rear
e) Nombre de cylindres par roue Number of cylinders per wheel	1	1
e1) Alésage Bore	\varnothing 53.97 mm	\varnothing 30.16 mm
f) Freins à tambours : Drum brakes :		
f1) Diamètre intérieur Internal diameter	X X X X +/- 1.5 mm	X X X X +/- 1.5 mm
f2) Nombre de garnitures par roue Number of linings per wheel	X X X X	X X X X
f3) Longueur développée des garnitures Developed length of linings	X X X X +/- 1.5 mm	X X X X +/- 1.5 mm
f4) Largeur des garnitures Width of the linings	X X X X +/- 1 mm	X X X X +/- 1 mm
g) Freins à disques : Disc brakes :		
g1) Nombre de plaquettes par roue Number of pads per wheel	2	2
g2) Nombre d'étriers par roue Number of calipers per wheel	1	1
g3) Matériau des étriers Caliper material	Cast iron	Cast iron
g4) Epaisseur du disque neuf Thickness of new disc	24 +/- 1 mm	10 +/- 1 mm
g5) Diamètre extérieur du disque External diameter of the disc	256 +/- 1.5 mm	260 +/- 1.5 mm
g6) Diamètre extérieur de frottement des plaquettes External diameter of pads' rubbing surface	254 +/- 1.5 mm	258 +/- 1.5 mm

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 Make SDN BHD (USPD)

Modele PROTON Satria C 1.6GLi
 Model PROTON SATRIA 1.6GLi

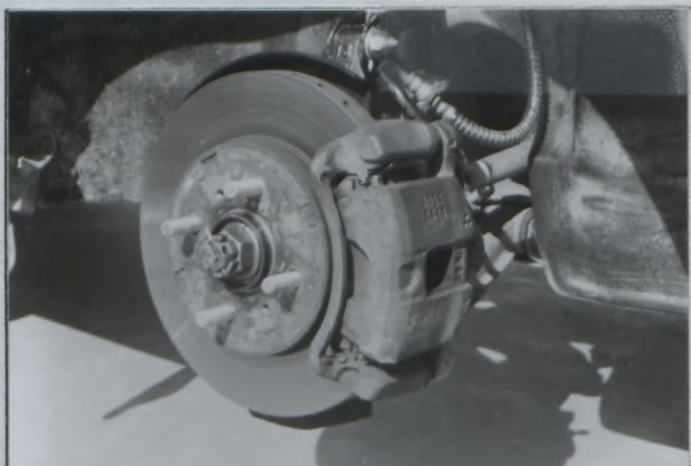
A-5547

	Avant / Front	Arrière / Rear
g7) Diamètre intérieur de frottement des plaquettes Internal diameter of pads' rubbing surface	166 +/- 1.5 mm	195 +/- 1.5 mm
g8) Longueur hors-tout des plaquettes Overall length of the pads	112 +/- 1.5 mm	80 +/- 1.5 mm
g9) Disques ventilés Ventilated discs	<input type="checkbox"/> oui <input checked="" type="checkbox"/> yes	<input checked="" type="checkbox"/> oui <input type="checkbox"/> non <input checked="" type="checkbox"/> yes <input type="checkbox"/> no

h) Frein de stationnement : Parking brake : h1) Système de commande Control system Cable

h2) Emplacement de commande Location of lever Between front seat h3) Effet sur roues On which wheels Avant / Front Arrière / Rear

V) Frein avant
Front brake



W) Frein arrière
Rear brake



804. Direction :
Steering :

a) Type
Type

b) Servo-assistance
Power assisted

Type
Type

	Avant / Front	Arrière / Rear
a) Type Type	Rack & Pinion	X X X X
b) Servo-assistance Power assisted	<input type="checkbox"/> oui <input checked="" type="checkbox"/> yes	<input checked="" type="checkbox"/> oui <input type="checkbox"/> non <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Type Type	hydraulic	X X X X

CJ FSA-FC-1900-008.01.FR.10.90

**FEDERATION INTERNATIONALE
DE L'AUTOMOBILE**

8, place de la Concorde, 75008 Paris
 Services Administratifs :
 8 bis, rue Boissy d'Anglas, 75008 Paris

Marque SDN BHD (USPD)
Make

Modèle PROTON SATRIA 1.6GLi
Model

A-5547

9. CARROSSÉRIE / BODYWORK

901. Intérieur : a) Ventilation

oui	non
yes	no

b) Chauffage

oui	non
yes	no

f) Toit ouvrant optionnel

oui	non
yes	no

f1) Type X X X X

f2) Système de commande X X X X

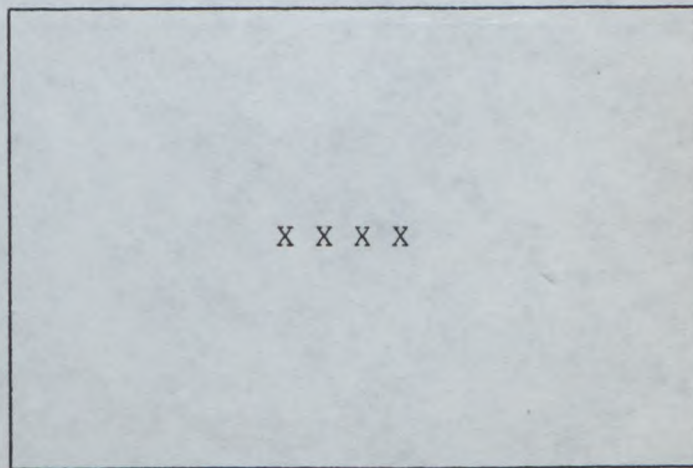
g) Système d'ouverture des vitres latérales
Opening system for side windows

Avant / Front	Arrière / Rear
Electrical	X X X X

X) Tableau de bord
Dashboard



Y) Toit ouvrant
Sunroof



Marque
Make

A-5547

902. Extérieur :
Exterior :

a) Nombre de portes
Number of doors 2

b) Hayon
Tailgate

oui	non
yes	no

c) Matériau des portières
Door material

Avant / Front	Arrière / Rear
Steel	X X X X

d) Matériau du capot avant
Front bonnet material Steel

e) Matériau du capot arrière / hayon
Rear bonnet / tailgate material Steel

f) Matériau de la carrosserie
Bodywork material Steel

h) Matériau de lunette arrière
Rear window material Safety Glass

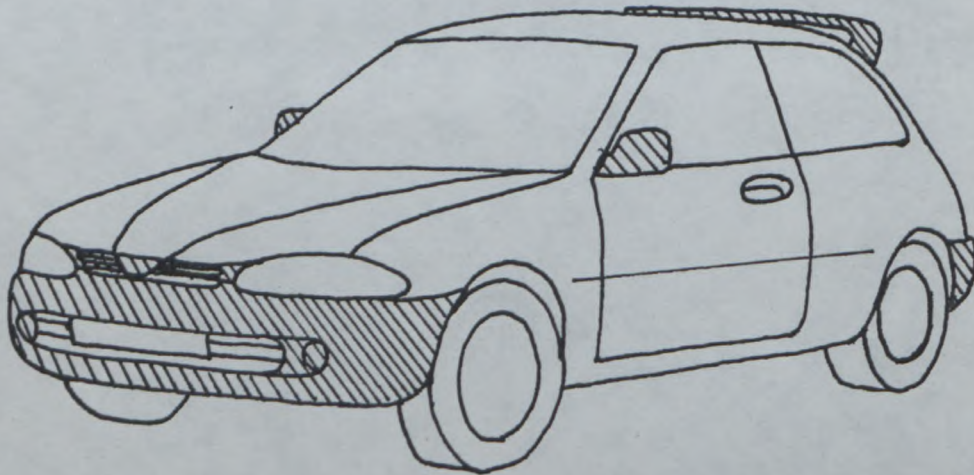
i) Matériau des glaces de custode
Rear quarter window material Safety Glass

k) Matériau des vitres latérales
Side window material

Avant / Front	Arrière / Rear
Safety Glass	Safety Glass
Plastics (Modified Poly-Propylene)	Plastics (Modified Poly-Propylene)

l) Matériau du pare-choc
Material of bumper

XIII) PARTIES DE CARROSSERIE SYNTHETIQUES / SYNTHETIC PARTS OF THE BODY :



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DE L'AUTOMOBILE

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FEDERATION INTERNATIONALE DE L'AUTOMOBILE

Homologation No
A-5547

Groupe
Group **A/B/T1**

Extension No

CERTIFICAT DE DIMENSIONS INTERIEURES
CERTIFICATE FOR INTERIOR DIMENSIONS

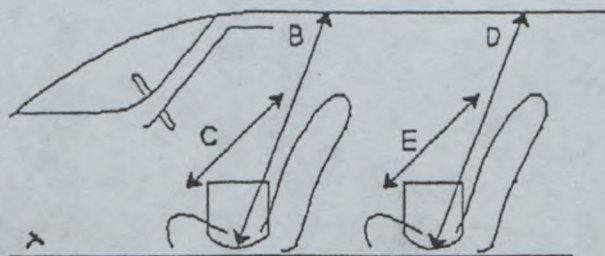
USAHASAMA PROTON-DRB

PROTON SONA C T 1.6GLI

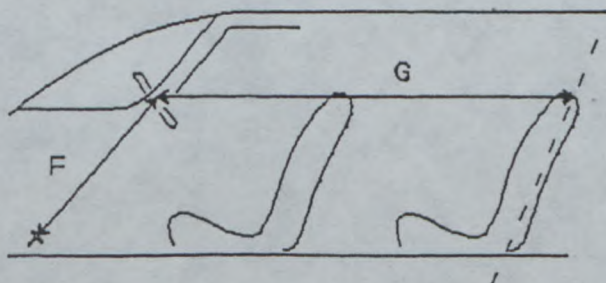
Véhicule: Constructeur SDN BHD (USPD)
Vehicle: Manufactureur _____

Modèle et type PROTON SATRIA 1.6GLi
Model and type _____

Dimensions intérieures comme définies par le Règlement d'Homologation
Interior dimensions as defined by the Homologation Regulations



B	(Hauteur sur sièges avant) (Height above front seats)	<u>1015</u> mm
C	(Largeur aux sièges avant) (Width at front seats)	<u>1240</u> mm
D	(Hauteur sur sièges arrière) (Height above rear seats)	<u>935</u> mm
E	(Largeur aux sièges arrière) (Width at rear seats)	<u>1270</u> mm



F	(Volant - Pédale de frein) (Steering wheel - Brake pedal)	<u>655</u> mm
G	(Volant - paroi de séparation arrière) (Steering wheel - rear bulkhead)	<u>1470</u> mm
H	H = F + G =	<u>2125</u> mm

**FEDERATION INTERNATIONALE
DE L'AUTOMOBILE**

8, place de la Concorde, 75008 Paris

Services Administratifs :

8 bis, rue Boissy d'Anglas, 75008 Paris



FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

Homologation No

A-5547

Group
Group

A/B/N/T1/Supertourisme
Supertouring

Extension No

01/01VO

FICHE D'EXTENSION D'HOMOLOGATION POUR ARMATURE DE SECURITE
FORM OF HOMOLOGATION EXTENSION FOR SAFETY CAGE

VO Variante option / Option variant

Véhicule: Constructeur
Vehicle: Manufactureur

USPD

Modèle et type
Model and type

PROTON SATRIA 1.6 GLI

Homologation valable à partir du
Homologation valid as from

01 JAN. 1996

	Arceau principal Main rollbar	Entretoise longitudinale Longitudinal strut	Entretoise diagonale Diagonal Strut	Arceau avant Front rollbar
Matériau Material	Steel (531)	Steel (531)	Steel (531)	Steel (531)
Diamètre extérieur Exterior diameter	38.1 mm	38.1 mm	38.1 mm	38.1 mm
Epaisseur de paroi Wall thickness	1.6 mm	1.6 mm	1.6 mm	1.6 mm
Limite élastique Elastic limit	70 daN/mm ²	70 daN/mm ²	70 daN/mm ²	70 daN/mm ²
Résistance à la traction Tensile strength	77 daN/mm ²	77 daN/mm ²	77 daN/mm ²	77 daN/mm ²

Fabricant de l'armature
Structure manufacturer

U.S.P.D. SDN BHD

Poids total y compris les fixations
Total weight including fixations

36 kg

Armature complète hors de la voiture
Complete structure outside the car



Nous attestons que la présente armature de sécurité répond aux dispositions de l'Annexe J de la FIA, en particulier en ce qui concerne ses implantations, ses connexions, et ses résistances aux contraintes.

We certify that the present safety structure complies with the conditions of the FIA Appendix J, in particular with regard to its attachments, its connections, and its stress resistances.

Signature du représentant du constructeur du véhicule
Signature of the car manufacturer representative

NAME: ABD RASHID BIN ABD RAHIM
Designation: EXECUTIVE OFFICER

FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

8, place de la Concorde, 75008 Paris

Services Administratifs :

8 bis, rue Boissy d'Angias, 75008 Paris

Marque USAHASAMA PROTON-DRB
Make SDN BHD (USPD)

Modèle PROTON Satria 1.6GLi
Model PROTON Satria 1.6GLi

Homologation No
A-5547

Extension No
01/01V0

PHOTO No 1 Latéral Bar to Floor/
Front Wheel Intrusion Bar



PHOTO No 2 Main Rollbar to Floor



PHOTO No 3 Rear Longitudinal/Side
Intrusion to Wheel Arch

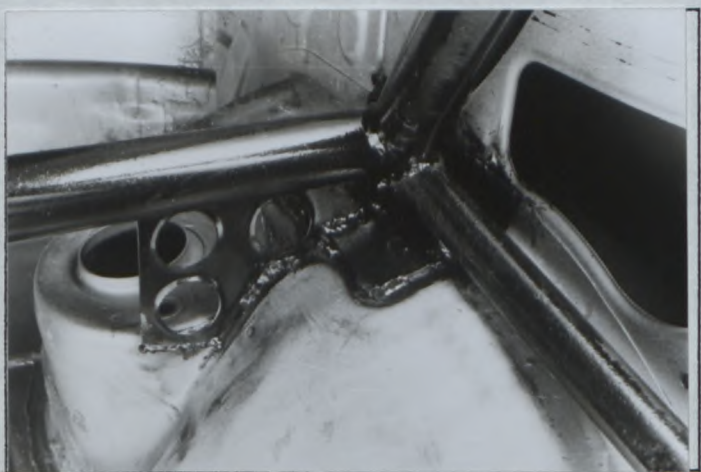


PHOTO No 4 Main Rollbar to B Pillar

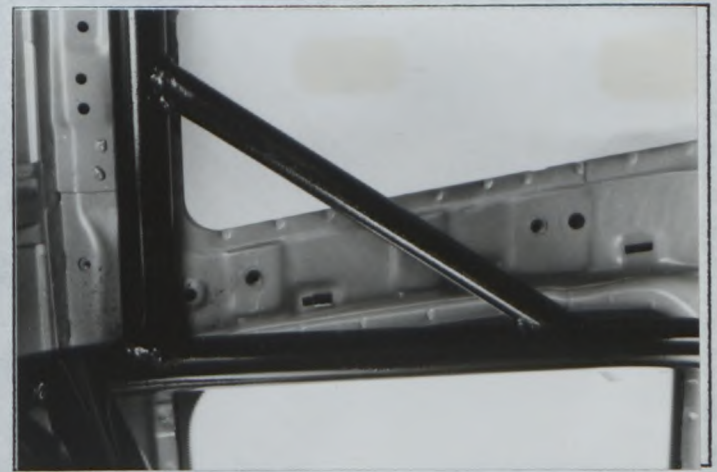


PHOTO No 5 Lateral Bar to A Pillar/
W/screen/roof Diagonal



PHOTO No 6 Lateral Bar/Brace to
A Pillar



PHOTO No 7 Latéral Bar/brace/ side Intrusion to A Pillar



PHOTO No 8 Lateral Brace to Chassis

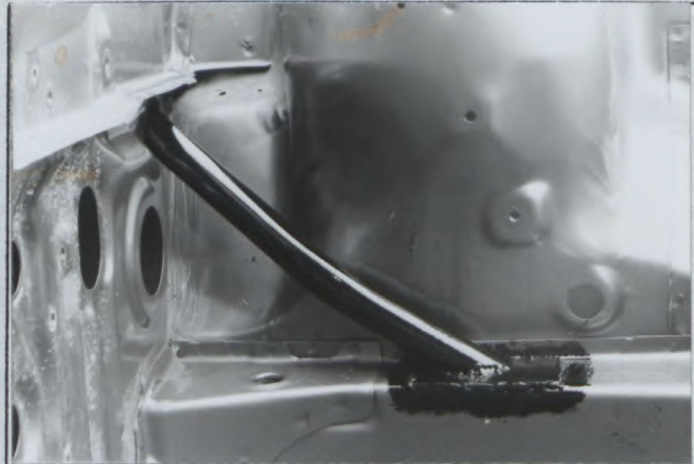


PHOTO No 9 Main Rollbar/Lateral/ Diagonal Joint

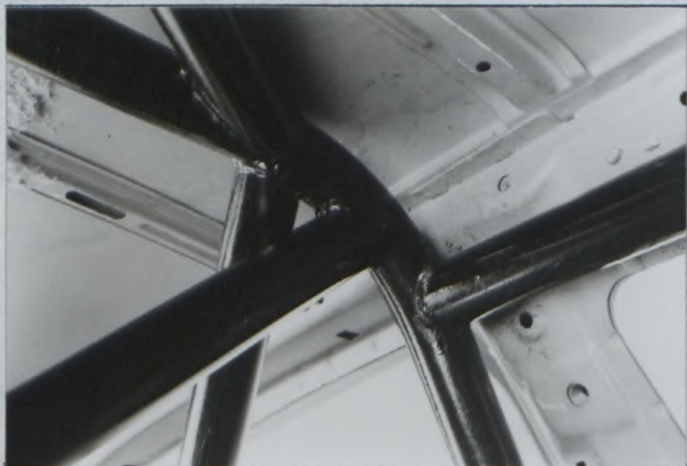


PHOTO No

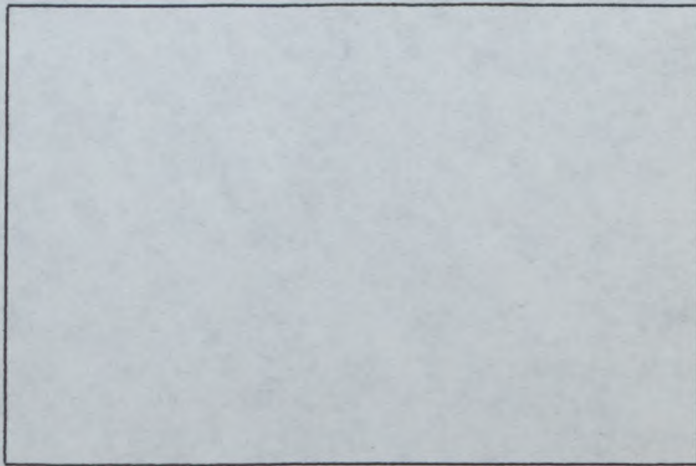


PHOTO No

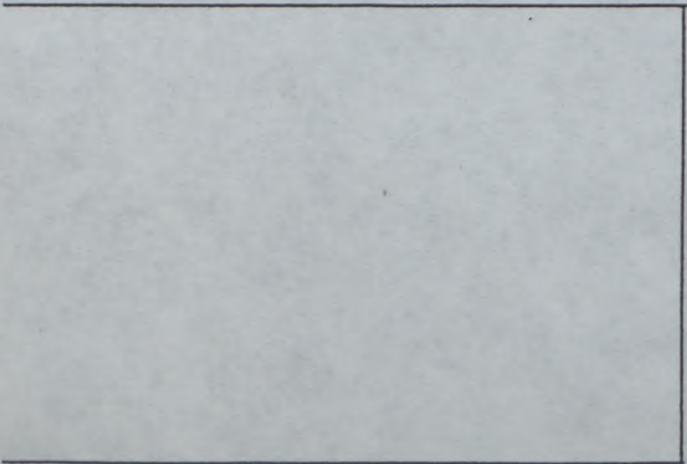
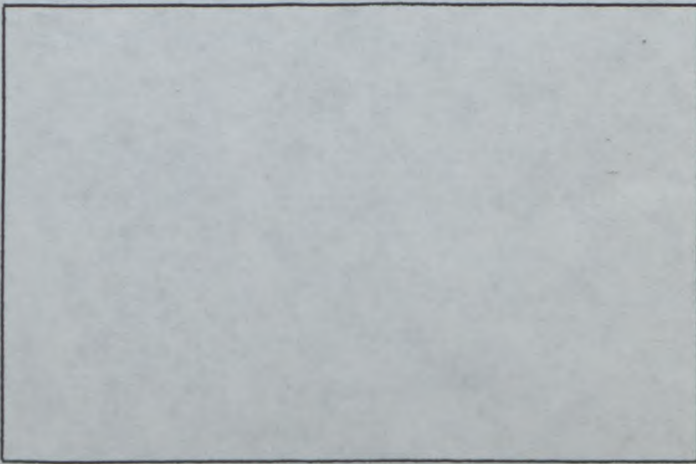


PHOTO No



FEDERATION INTERNATIONALE DE L'AUTOMOBILE

8, place de la Concorde, 75108 Paris

Services Administratifs :

9 bis, rue Boissy d'Anglas, 75008 Paris



FEDERATION INTERNATIONALE DE L'AUTOMOBILE

Homologation No

A-5547

Groupe A/B/N Group

Extension No

02/02 VO

FICHE D'EXTENSION D'HOMOLOGATION FORM OF HOMOLOGATION EXTENSION

- ES Evolution sportive du type / Sporting evolution of the
ET Evolution normale du type / Normal evolution of the
VF Variante de fourniture / Supply variant
X VO Variante option / Option variant
ER Erratum / Erratum

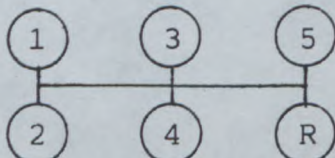
Vehicule: Constructeur USAHASAMA PROTON-DRB SDN BHD (USPD)
Vehicule: Manufactureur
Modele et type PROTON SATRIA 1.6GLi
Model and type

Homologation valable a partir du 01 JAN. 1996
Homologation valid as from

Table with 3 columns: Page ou ext., Article, Description. Contains details for GEARBOX (Manual) and Gear change gate with a gear diagram.

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FEDERATION INTERNATIONALE DE L'AUTOMOBILE
8, place de la Concorde, 75008 Paris
Services Administratifs :
8 bis, rue Boissy d'Anglas, 75008 Paris

Page ou ext. Page or ext.	Article Article	Description Description																																								
	603	GEARBOX (Cont'd)																																								
	b)	Make : ALBINS																																								
	d)	Type and location : Mechanical, on floor.																																								
	e)	Ratios																																								
		Manual																																								
		<table border="1"> <thead> <tr> <th></th> <th>No of Teeth</th> <th>Ratio</th> <th>Constant</th> <th>Synchro</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>16/33</td> <td>2.64</td> <td>X</td> <td></td> </tr> <tr> <td>2</td> <td>20/30</td> <td>1.92</td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>21/25</td> <td>1.524</td> <td>X</td> <td></td> </tr> <tr> <td>4</td> <td>24/23</td> <td>1.227</td> <td>X</td> <td></td> </tr> <tr> <td>5</td> <td>26/21</td> <td>1.034</td> <td>X</td> <td></td> </tr> <tr> <td>R</td> <td>38/12</td> <td>4.053</td> <td>X</td> <td></td> </tr> <tr> <td>Constant</td> <td>25/32</td> <td>1.280</td> <td></td> <td></td> </tr> </tbody> </table>		No of Teeth	Ratio	Constant	Synchro	1	16/33	2.64	X		2	20/30	1.92	X		3	21/25	1.524	X		4	24/23	1.227	X		5	26/21	1.034	X		R	38/12	4.053	X		Constant	25/32	1.280		
	No of Teeth	Ratio	Constant	Synchro																																						
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R	38/12	4.053	X																																							
Constant	25/32	1.280																																								
	f)	Gear change Gate 																																								
	603	GEARBOX (Cont'd)																																								
	Photo 1	Alternative gearbox assy. 6 speed.																																								
	Photo 2	Alternative gearbox assy. 5 speed.																																								
	605	FINAL DRIVE																																								
	a)	Type of final drive : spur gear.																																								
	b)	Ratio : 4.714, 4.642, 4.571, 4.428, 4.285																																								
	c)	No of Teeth : 66/14, 65/14, 64/14, 62/14, 60/14																																								
	606	SHAFTS																																								
	Photo 3	Reinforced driveshaft, front (LH)																																								
	Photo 4	Reinforced driveshaft, front (RH)																																								

Page ou ext. Page or ext.	Article Article	Description Description
	7	SUSPENSION
	Photo 5	Alternative Heavy Duty Front Knuckle, type 1.
	Photo 6	Alternative Heavy Duty Front Knuckle, type 2.
	Photo 7	Front Stabilizer Bar Diameter : 19mm - 26mm
	Photo 8	Rear Stabilizer Bar, Type 1 Diameter : 10mm - 20mm
	Photo 9	Rear Stabilizer Bar, Type 2 Diameter : 12mm - 30mm
	Photo10	Stabilizer Link, Type 1
	Photo11	Stabilizer Link, Type 2 Reinforced Front Wishbone
		TYPE : 1, 2, 3, PHOTO : 12, 13, 14,
		Reinforced Trailing Arm
		TYPE : 1, 2, 3, PHOTO : 15, 16, 17,
	Photo 18	Alternative Front Hub.
	Photo 19	Alternative Rear Hub.
	Photo 20	Reinforced Upper Transverse Link (Rear) Reinforced Toe control Link (Rear)
		TYPE : 1, 2, PHOTO : 21, 22,
		Reinforced Lower Transverse Link (Rear)
		TYPE : 1, 2, 3, PHOTO : 23, 24, 25,
	Photo 26	Reinforced Rear Mount for Front wishbone.
	Photo 27	Reinforced Front subframe.
	Photo 28	Reinforced Front Longitudinal Member.
	Photo 29	Reinforcing Plate for Front Top Mount. Heavy Duty Front Top Mount (Strut)
		TYPE : 1, 2, PHOTO : 30, 31,
		Heavy Duty Rear Top Mount (Damper)
		TYPE : 1, 2, PHOTO : 32, 33,
	Photo 34	Liquid Cooled Front Damper.
	Photo 36	Suspension Cooling Radiator, Pump and Tank.
	Photo 37	Rear Upright. (capacity 0,5 lt)
	Photo 38	Rear Trailing Link.

Marque
Make

USAHASAMA PROTON-DRB
SDN BHD (USPD)

Modèle
Model

PROTON SATRIA 1.6GLi

A-5547

Extension No

02/02V0

Page ou ext. Page or ext.	Article Article	Description Description
	801	WHEELS
Photo 39		Wheel Spacer
	803	BRAKES
Photo 40		Hydraulic Handbrake.
Photo 41		Fluid distribution Valve.
Photo 42		Pedal Box for Dual Master Cylinders.
		Master Cylinder
		TYPE : 1, 2,
		PHOTO : 43, 44,
	b)	No of Master Cylinders : 2.
	b1)	Bore 15.9mm - 25.4mm
		Part No. CP2623 CP4623
		Master Cylinders may be front or rear.
	c)	Servo : No.
	d)	Braking Regulator : Yes.
	d1)	Location : Dashboard in cockpit.
Photo 45		Brake regulator.
Photo 46		Stone Guard.
Photo 47		Wheel Scraper.
		Brake Disc Bell.
		TYPE : 1, 2,
		PHOTO : 48, 49,
		Brake Caliper Mount.
		TYPE : 1, 2, 3,
		PHOTO : 50, 51, 52,

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FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

8, place de la Concorde, 75008 Paris Page 4

Services Administratifs :

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FICHE D'HOMOLOGATION VO POUR FREINS A DISQUE (à utiliser avec première page de " Fiche d'Extension d'Homologation ")
 VO HOMOLOGATION FORM FOR DISC BRAKES (to be used with first page of " Form of Homologation Extension ")

803. Freins :
 Brakes :

	Avant / Front	Arrière/Rear
e) Nombre de cylindres par roue Number of cylinders per wheel	4	2
e1) Alésage Bore	∅ 38.1/41.3 mm	∅ 44.5 mm
g) Freins à disques : Disc brakes :		
g1) Nombre de plaquettes par roue Number of pads per wheel	2	2
g2) Nombre d'étriers par roue Number of calipers per wheel	1	1
g3) Matériau des étriers Caliper material	Aluminum Alloy	Aluminum Alloy
g4) Epaisseur du disque neuf Thickness of new disc	25.4 +/- 1 mm	10.0 +/- 1 mm
g5) Diamètre extérieur du disque External diameter of the disc	∅ 289.0 +/- 1.5 mm	∅ 260.0 +/- 1.5 mm
g6) Diamètre extérieur de frottement des plaquettes External diameter of pads' rubbing surface	∅ 289.0 +/- 1.5 mm	∅ 258.0 +/- 1.5 mm
g7) Diamètre intérieur de frottement des plaquettes Internal diameter of pads' rubbing surface	∅ 190.0 +/- 1.5 mm	∅ 195.0 +/- 1.5 mm
g8) Longueur hors-tout des plaquettes Overall length of the pads	131.0 +/- 1.5 mm	63.0 +/- 1.5 mm
g9) Disques ventilés Ventilated discs	<input type="checkbox"/> oui <input checked="" type="checkbox"/> non <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input checked="" type="checkbox"/> oui <input type="checkbox"/> non <input checked="" type="checkbox"/> yes <input type="checkbox"/> no

PHOTO No

Avant / Front

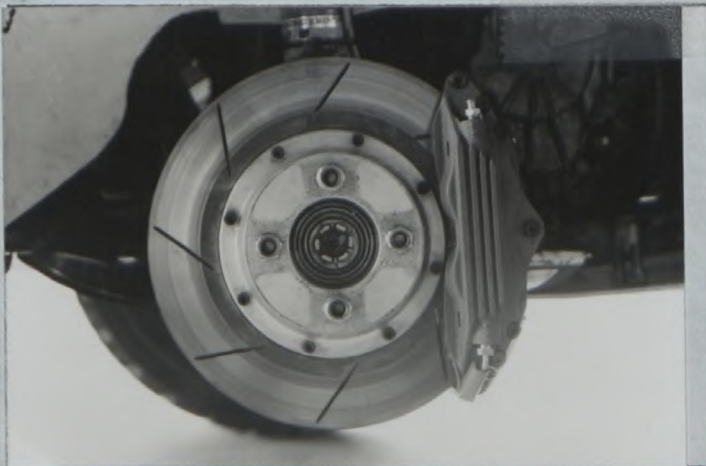
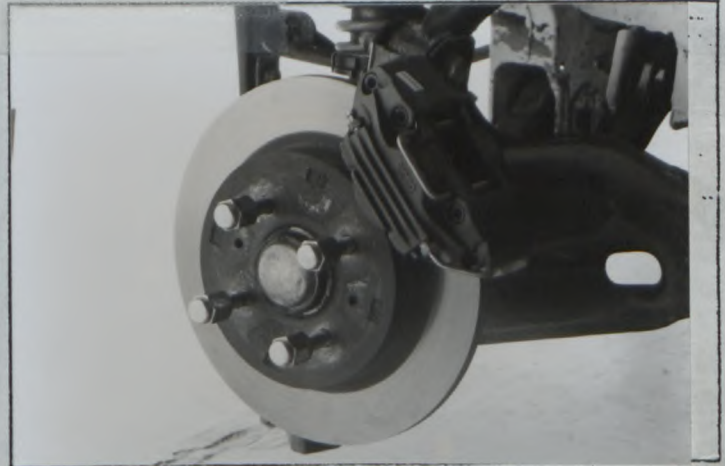


PHOTO No

Arrière / Rear



Page ou ext. Page or ext.	Article Article	Description Description																																													
	803	BRAKES (CONT'D)																																													
		Front and/or Rear Brake Caliper (Lug or Radial Mounting)																																													
		<table border="1"> <thead> <tr> <th>Type 1</th> <th>Type 2</th> <th>Type 3</th> <th>Type 4</th> <th>Type 5</th> </tr> </thead> <tbody> <tr> <td>e)</td> <td>2</td> <td>2</td> <td>4</td> <td>4</td> </tr> <tr> <td>e1)</td> <td>38.1</td> <td>44.5</td> <td>38.1/41.3</td> <td>38.1/41.3</td> </tr> <tr> <td>g1)</td> <td>2</td> <td>2</td> <td>4</td> <td>2</td> </tr> <tr> <td>g2)</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>g3)</td> <td colspan="4">Aluminium Alloy</td> </tr> <tr> <td>g8)</td> <td>62</td> <td>62</td> <td>53</td> <td>113</td> </tr> <tr> <td>Part No</td> <td>CAR7940</td> <td>CAR7940</td> <td>CAR6310TR</td> <td>CAR63101</td> </tr> <tr> <td>Photo</td> <td colspan="2">53</td> <td>54</td> <td>55</td> </tr> </tbody> </table>	Type 1	Type 2	Type 3	Type 4	Type 5	e)	2	2	4	4	e1)	38.1	44.5	38.1/41.3	38.1/41.3	g1)	2	2	4	2	g2)	1	1	1	1	g3)	Aluminium Alloy				g8)	62	62	53	113	Part No	CAR7940	CAR7940	CAR6310TR	CAR63101	Photo	53		54	55
Type 1	Type 2	Type 3	Type 4	Type 5																																											
e)	2	2	4	4																																											
e1)	38.1	44.5	38.1/41.3	38.1/41.3																																											
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g2)	1	1	1	1																																											
g3)	Aluminium Alloy																																														
g8)	62	62	53	113																																											
Part No	CAR7940	CAR7940	CAR6310TR	CAR63101																																											
Photo	53		54	55																																											
		Front and/or Rear Brake Disc (Plain or Grooved, can be Cross Drilled)																																													
		All Discs may be 8, 10 or 12 Bolt Fixing.																																													
		<table border="1"> <thead> <tr> <th></th> <th>TYPE 1</th> <th>TYPE 2</th> </tr> </thead> <tbody> <tr> <td>g4)</td> <td>May be 25.4 - 28.0</td> <td>9.6</td> </tr> <tr> <td>g5)</td> <td>May be 280.0 - 328.0</td> <td>280.0</td> </tr> <tr> <td>g6)</td> <td>May be 280.0 - 328.0</td> <td>280.0</td> </tr> <tr> <td>g7)</td> <td>May be 155.0 - 222.0</td> <td>192.0</td> </tr> <tr> <td>g9)</td> <td>YES</td> <td>NO</td> </tr> <tr> <td>Part No</td> <td>DIV 2153</td> <td>DS 1907</td> </tr> <tr> <td>Photo</td> <td>57, 65, 66</td> <td>58, 65, 66</td> </tr> </tbody> </table>		TYPE 1	TYPE 2	g4)	May be 25.4 - 28.0	9.6	g5)	May be 280.0 - 328.0	280.0	g6)	May be 280.0 - 328.0	280.0	g7)	May be 155.0 - 222.0	192.0	g9)	YES	NO	Part No	DIV 2153	DS 1907	Photo	57, 65, 66	58, 65, 66																					
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g7)	May be 155.0 - 222.0	192.0																																													
g9)	YES	NO																																													
Part No	DIV 2153	DS 1907																																													
Photo	57, 65, 66	58, 65, 66																																													
	804	N.B. Swept area of disc may be less depending on caliper used.																																													
	804	STEERING																																													
	Photo59	Alternative Steering Rack. Ratio : 10.3:1 (Part No: OJ43115)																																													
	Photo60	Reinforced Steering Column.																																													
	Photo61	Heavy Duty Power Steering Pump, Driven from Camshaft.																																													

(A) PSA / F. Chanyon 830 - 0101111080

marque
Make

USAHASAMA PROTON-DRB

Model

PROTON Satria 1.6GLI

A-5547

SDN BHD (USPD)

Extension No

02/02V0

Page ou ext. Page or ext.	Article Article	Description Description
	9	BODYWORK
	Photo 62	Seat Supports.
	a)	Ventilation : YES
	f1)	Type : Fixed with Internal Valve.
	f2)	Control System : Manual.
	Photo 63	Ventilation Foil (for rallies only) Max Height less than 100mm Max Width less than 500mm Mounted within first third of roof.
	603	GEARBOX (Cont'd)
	Photo 64	Gear Lever Assy.

(3) FISA / F. Champion 1990 - 01/01/1991 10.00

FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

8, place de la Concorde, 75008 Paris Page 7

Services Administratifs :

8 bis, rue Boissy d'Angas, 75008 Paris

Marque USAHASAMA PROTON-DRB
Make SDN BHD (USPD)

modele PROTON SATRIA 1.6GLI
Model PROTON SATRIA 1.6GLI

Homologation No
A-5547

Extension No
02/02V0

PHOTO No 1 Alternative gearbox
assy. 6 speed

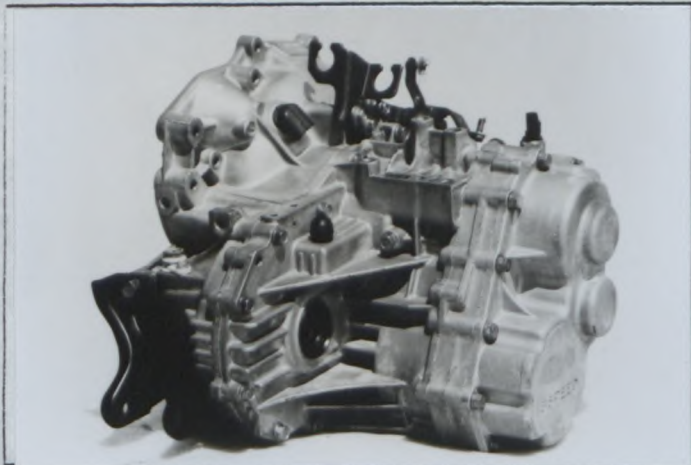


PHOTO No 2 Alternative
gearbox assy. 5 speed

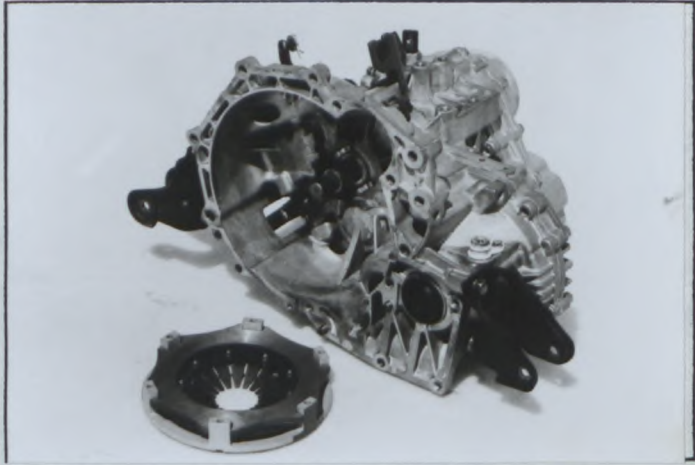


PHOTO No 3 Reinforced driveshaft,
front (LH)



PHOTO No 4 Reinforced driveshaft,
front (RH)

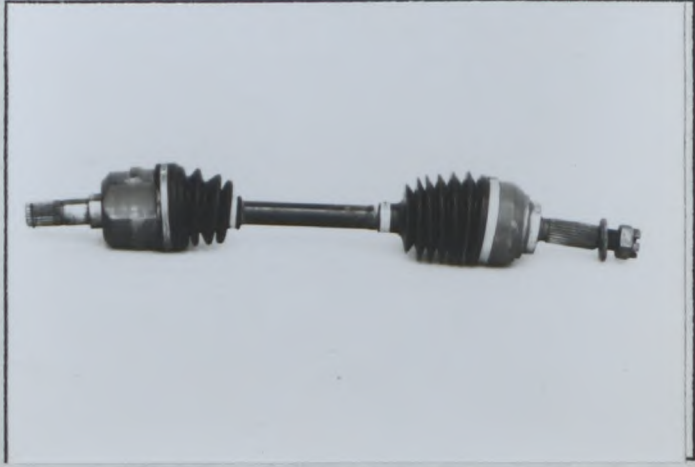
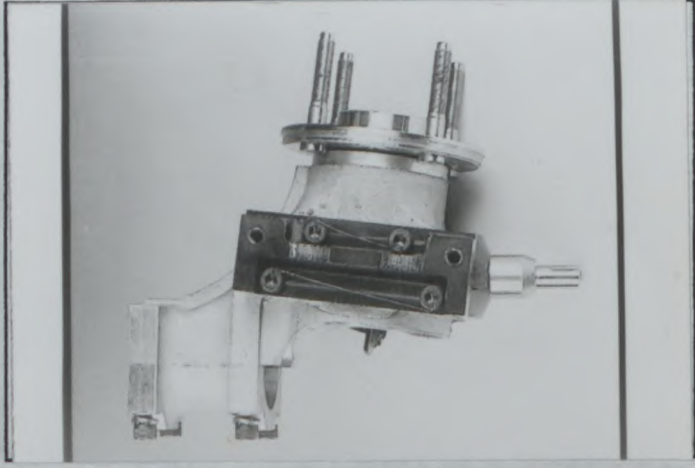


PHOTO No 5 Alternative Heavy Duty
Front Knuckle, type 1



PHOTO No 6 Alternative Heavy Duty
Front Knuckle, type 2



Marque USAHASAMA PROTON-DRB
Make SDN BHD (USPD)

Modèle PROTON SATRIA 1.6GLi
Model PROTON ONA CC CT 1.6GLi

A-5547

Extension No.
02/02 VO

PHOTO No 7 Front Stabilizer Bar



PHOTO No 8 Rear Stabilizer Bar, type 1

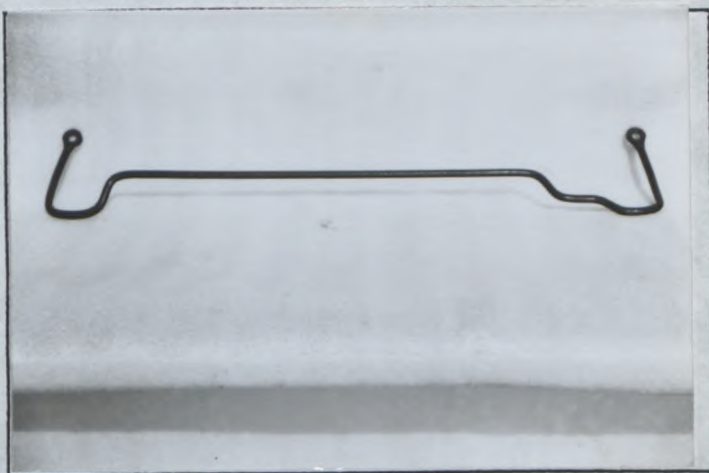


PHOTO No 9 Rear Stabilizer Bar, type 2

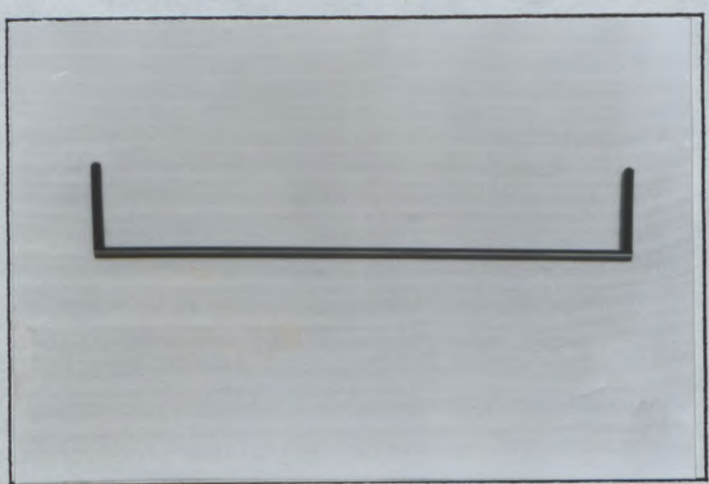


PHOTO No 10 Stabilizer Link, type 1

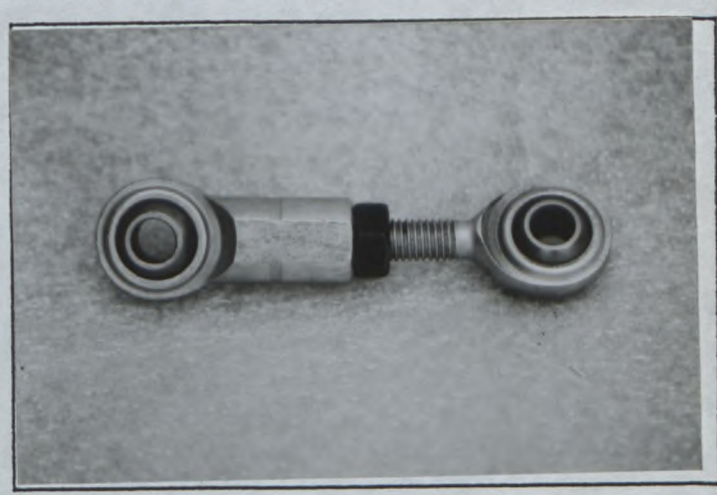
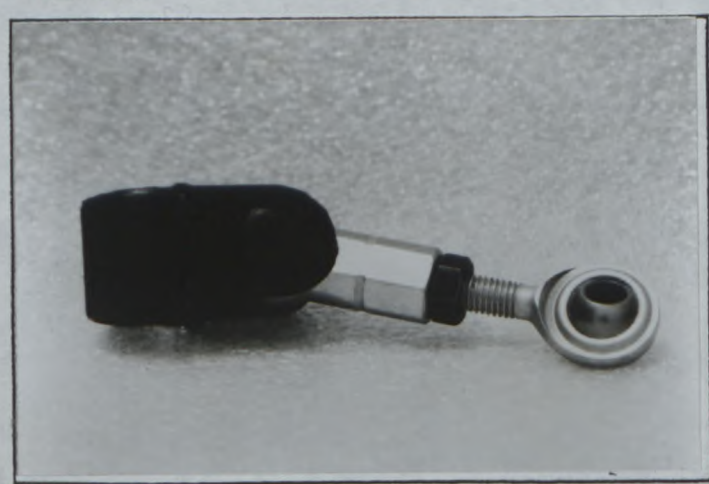


PHOTO No 11 Stabilizer Link, type 2



Reinforced Front
PHOTO No 12 Wishbone, type 1



USAHASAMA PROTON-DRB
Marque SDN BHD (USPD)
Make

PROTON ONA C CT 1.6GLI
Modèle PROTON SATRIA 1.6GLI
Model

Homologation No
A-5547

Extension No
0-2/02V0

PHOTO No 13 Reinforced Front
Wishbone, type 2



PHOTO No 14 Reinforced
Front Wishbone, type 3



PHOTO No 15 Reinforced Trailing
Arm, type 1



PHOTO No 16 Reinforced Trailing
Arm, type 2

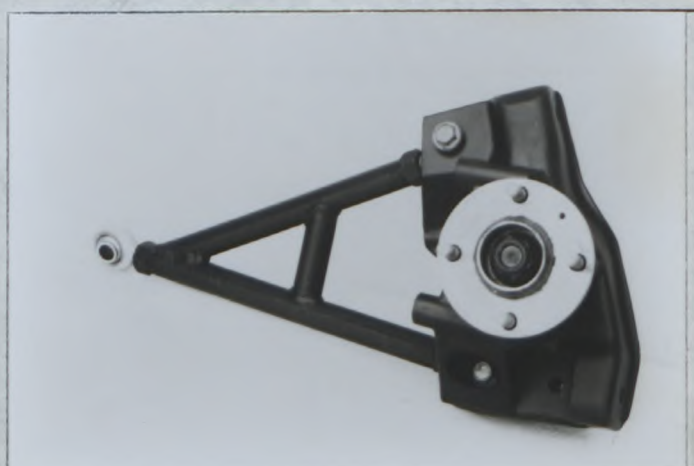


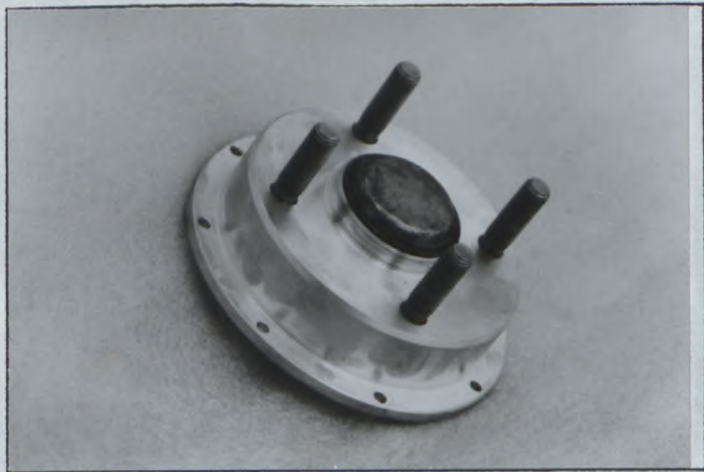
PHOTO No 17 Reinforced Trailing
Arm, type 3



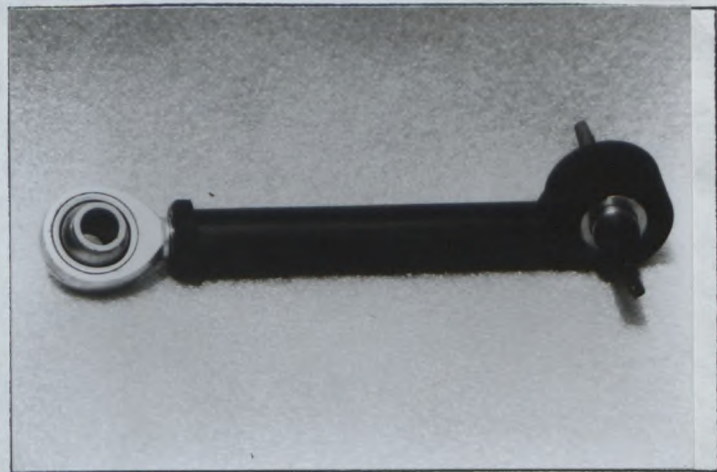
PHOTO No 18 Alternative Front Hub



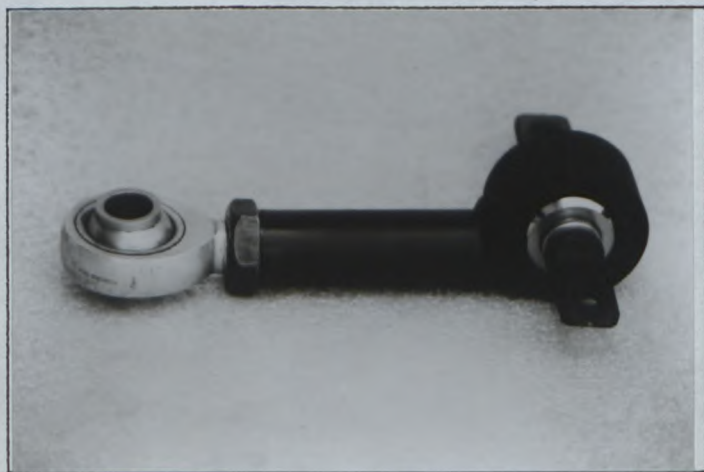
PHOTO No 19 Alternative Rear Hub



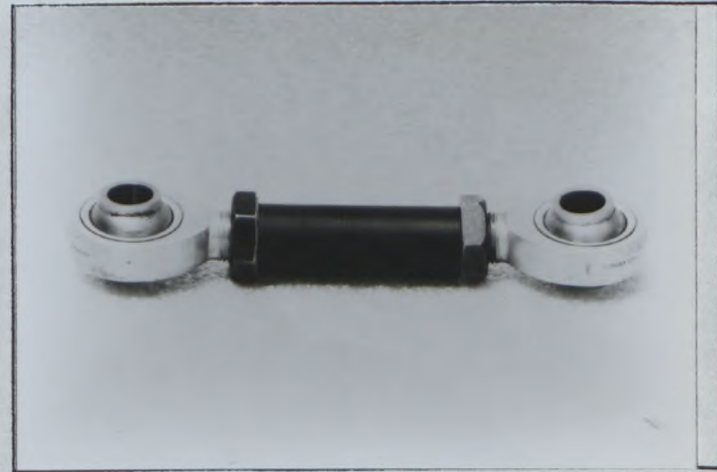
Reinforced Upper
PHOTO No 20 Transverse Link (Rear)



Reinforced Toe Control
PHOTO No 21 Link (Rear), type 1



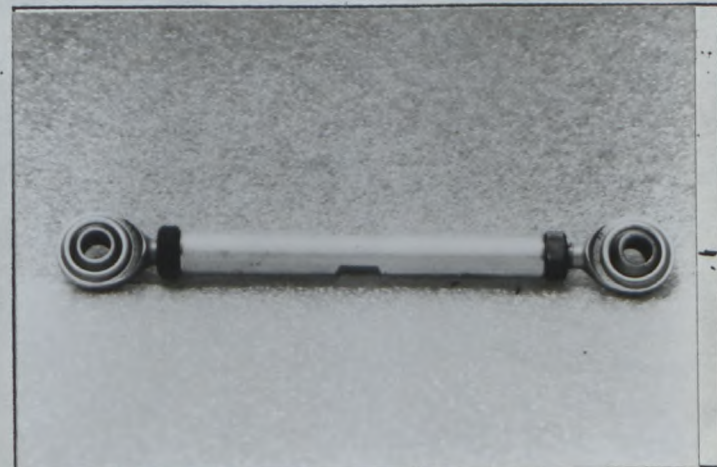
Reinforced Toe Control
PHOTO No 22 Link (Rear), type 2



Reinforced Lower Transverse
PHOTO No 23 Link (Rear), type 1



Reinforced Lower Transverse
PHOTO No 24 Link (Rear), type 2



Marque USAHASAMA PROTON-DRB
Make SDN BHD (USPD)

Modèle PROTON SATRIA 1.6GLi
Model

A-5547

Extension No.

02/02V0

PHOTO No 25 Reinforced Lower Transverse Link (Rear), type 3

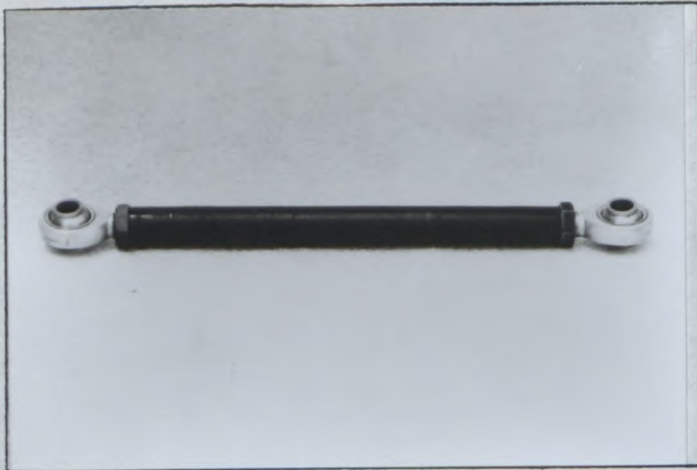


PHOTO No 26 Reinforced Rear Mount for Front Wishbone



PHOTO No 27 Reinforced Front Subframe



PHOTO No 28 Reinforced Front Longitudinal Member



PHOTO No 29 Reinforcing Plate for Front Top Mount

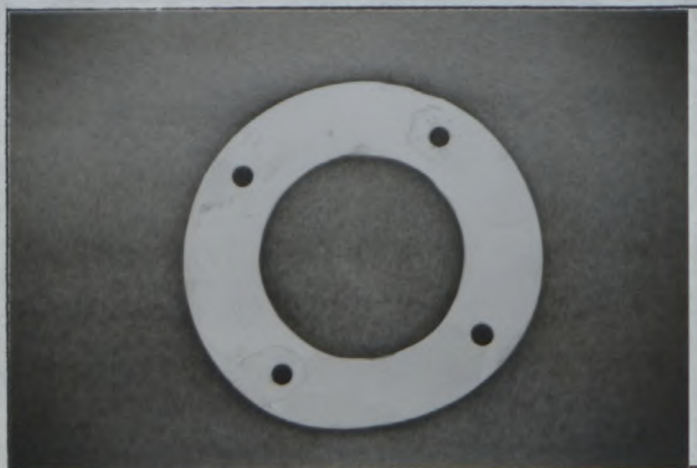
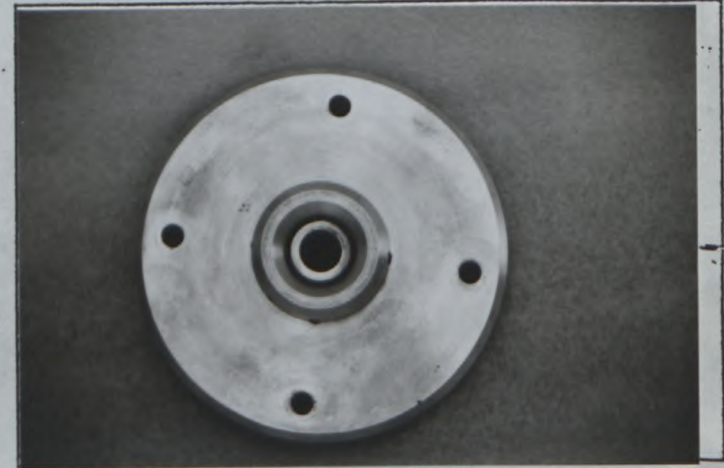


PHOTO No 30 Heavy Duty Front Top Mount (Strut), type 1



Marque USAHASAMA PROTON-DRB
Make SDN BHD (USPD)

Modèle PROTON SATRIA 1.6GLi
Model PROTON SATRIA 1.6GLi

A-5547

Extension No.
02/02 VO

PHOTO No 31 Heavy Duty Front Top Mount (Strut), type 2



PHOTO No 32 Heavy duty Rear Top Mount (Damper) type 1

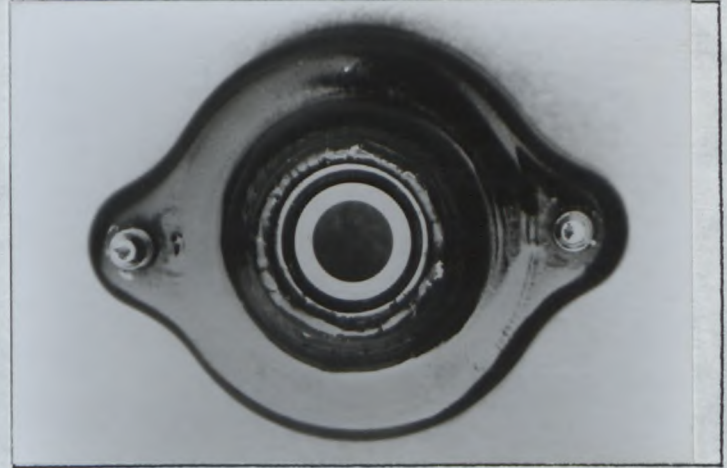


PHOTO No 33 Heavy Duty Rear Top Mount (Damper), type 2

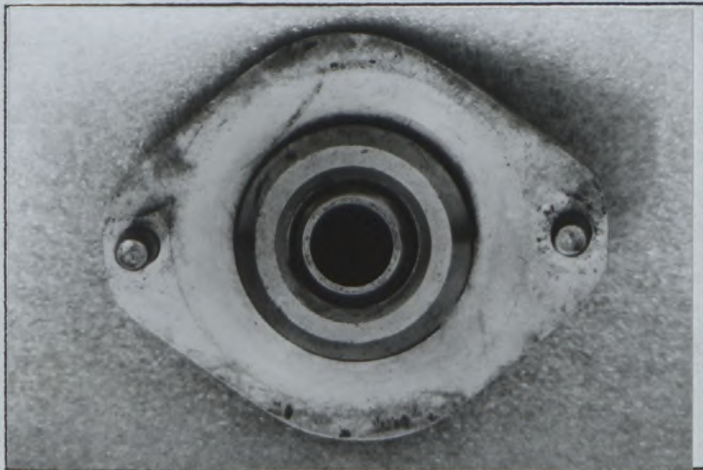


PHOTO No 34 Liquid Cooled Front Damper

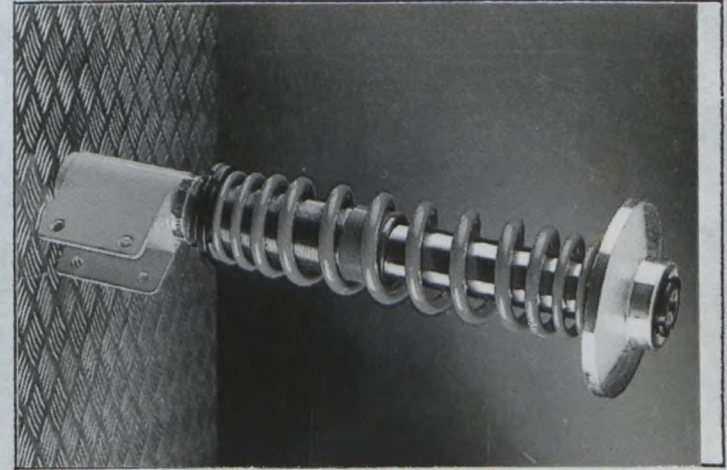
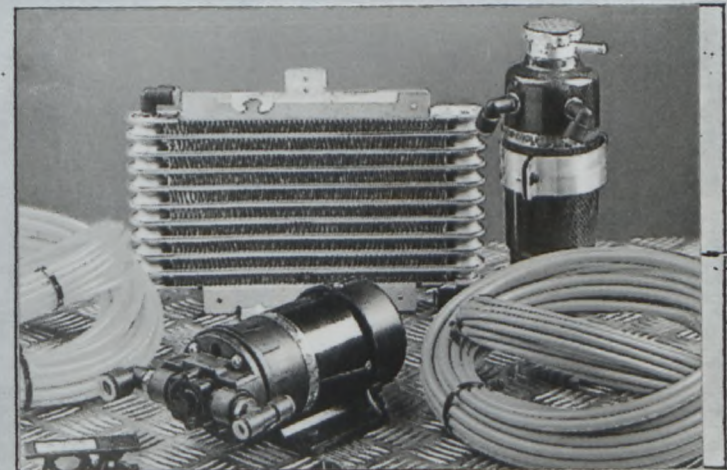


PHOTO No 36 Suspension Cooling Radiator, Pump & Tank



Marque USAHASAMA PROTON-DRB
Make SDN BHD (USPD)

Modèle PROTON SATRIA 1.6GLi
Model PROTON SONA CT 1.6GLi

A-5547
Extension No.
02/02 V0

PHOTO No 37 Rear Upright

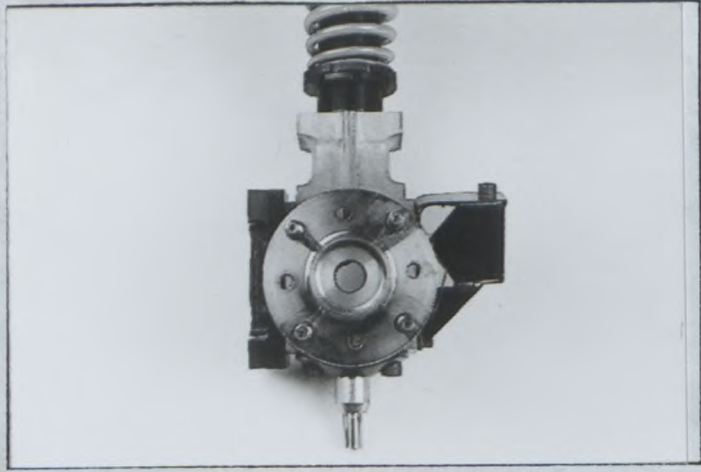


PHOTO No 38 Rear Trailing Link

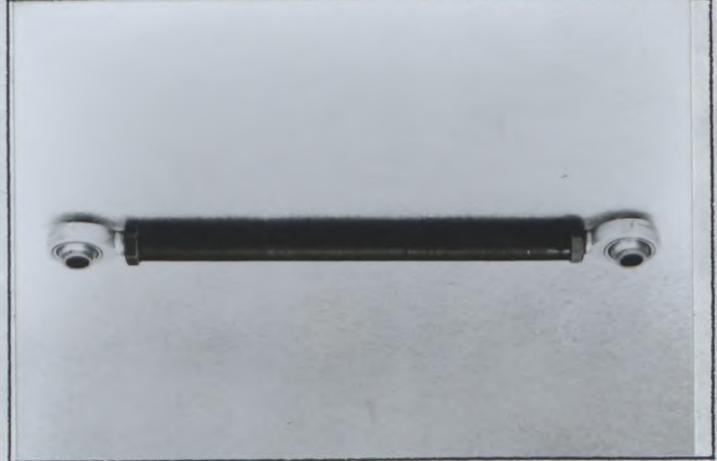


PHOTO No 39 Wheel Spacer

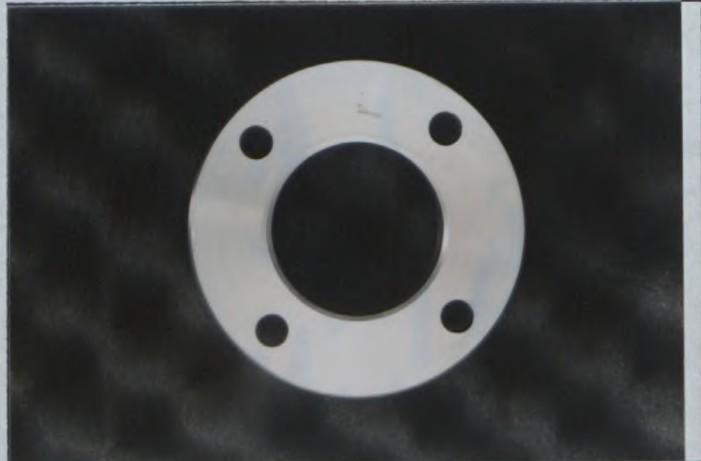


PHOTO No 40 Hydraulic Handbrake

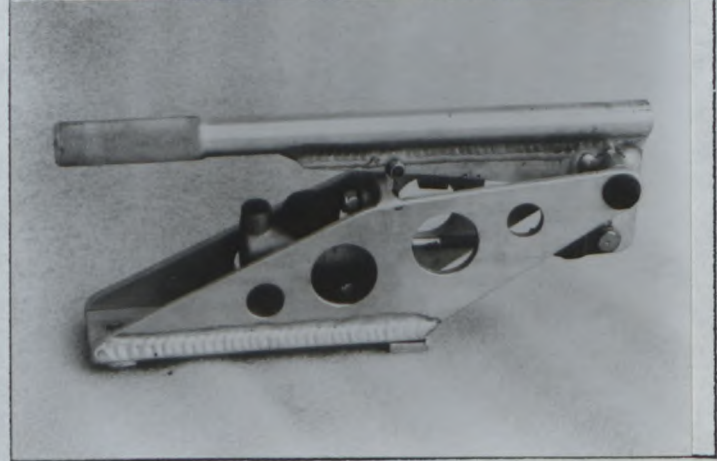


PHOTO No 41 Fluid distribution Valve



PHOTO No 42 Pedal Box for Dual Master Cylinders

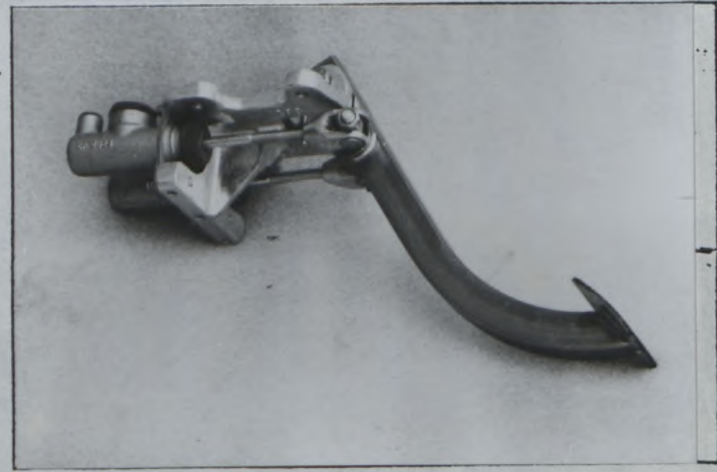


PHOTO No 43 Master Cylinder, type 1

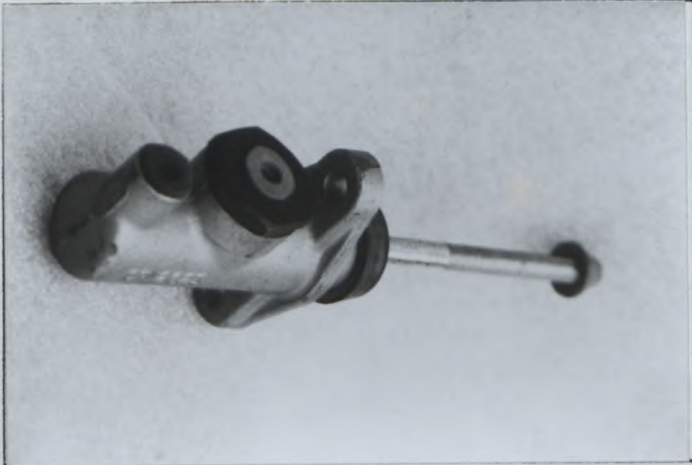


PHOTO No 44 Master Cylinder, type 2



PHOTO No 45 Brake Regulator



PHOTO No 46 Stone Guard

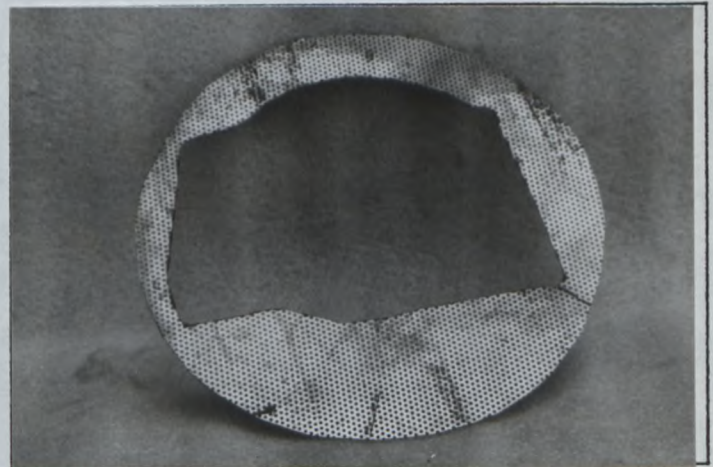


PHOTO No 47 Wheel Scraper

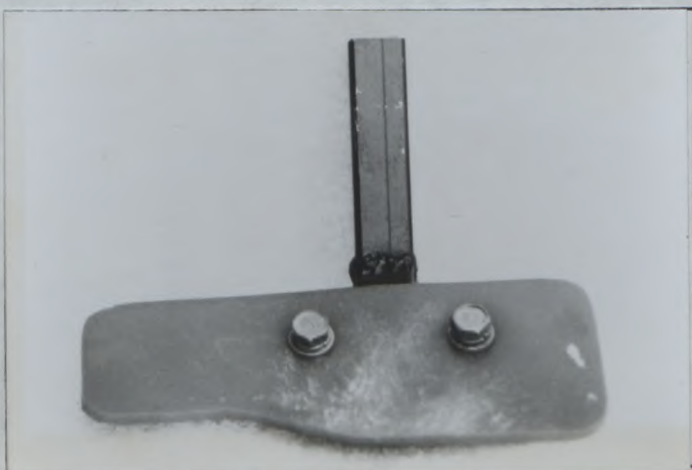
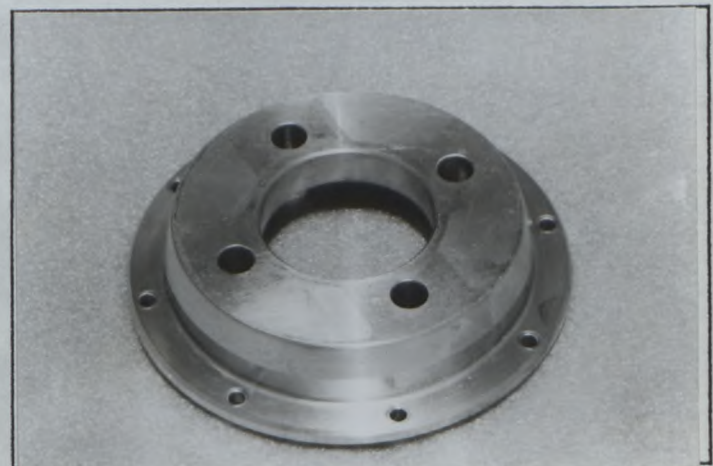


PHOTO No 48 Brake Disc Bell, type 1



Marque
Make

SDN BHD (USPD)

Modèle
Model

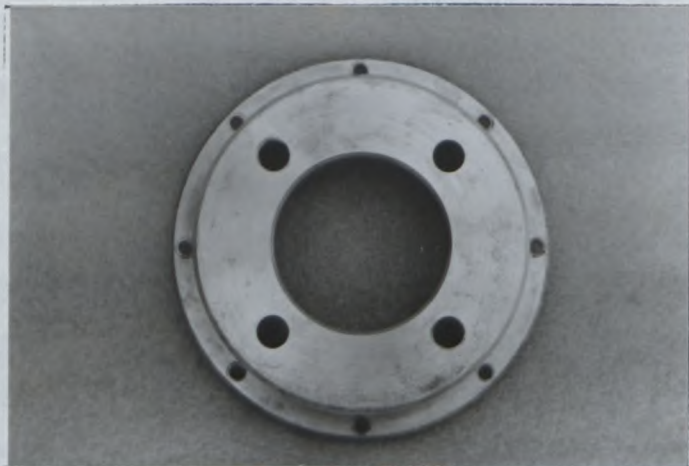
PROTON SATRIA 1.6GLi

A-5547

Extension No

02/02 VO

PHOTO No 49 Brake Disc Bell, type 2



Brake Caliper
PHOTO No 50 Mount, type 1

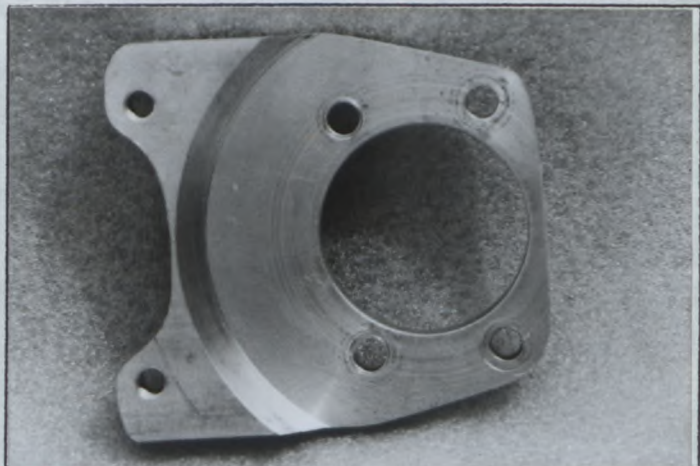


PHOTO No 51 Brake Caliper Mount, type 2



PHOTO No 52 Brake Caliper Mount, type 3

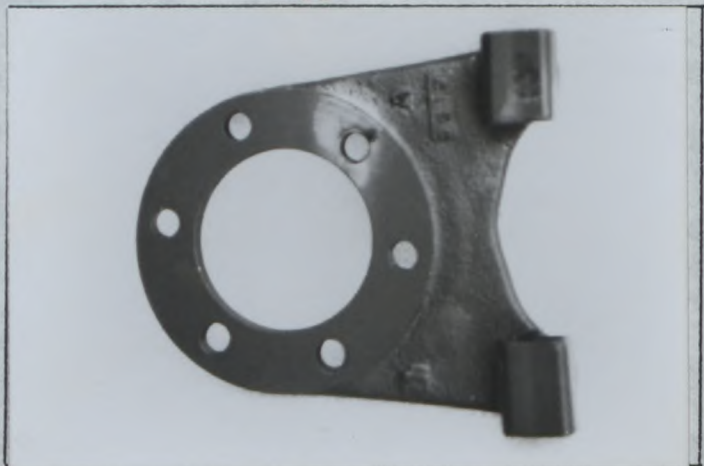


PHOTO No 53 Front and/or Rear Brake Caliper (Lug or Radial Mounting), type 1 & 2

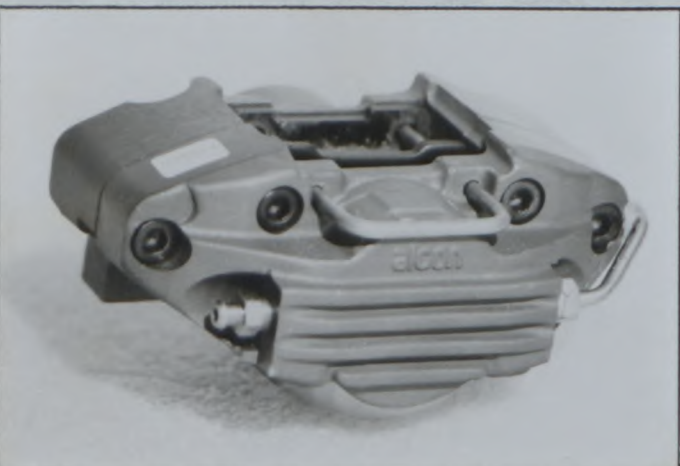
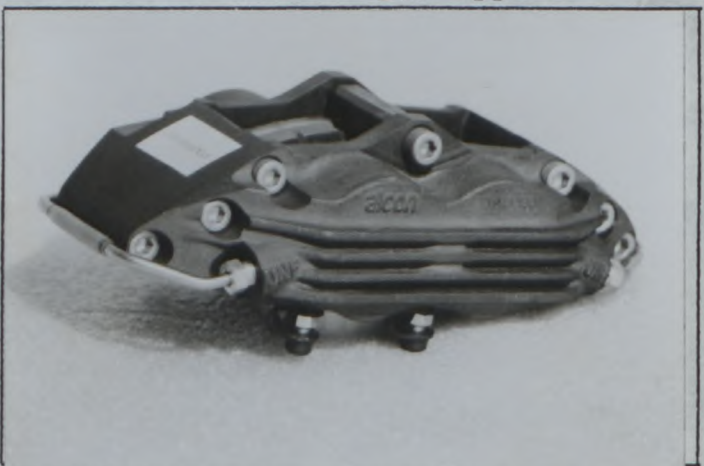


PHOTO No 54 Front and/or Rear Brake Caliper (Lug or Radial Mounting), type 3



USAHASAMA PROTON-DRB
SDN BHD (USPD)

Marque
Make

PROTON Satria 1.6GLi
Modèle
Model

Homologation No

A-5547

Extension No

02/02V0

PHOTO No 55 Front and/or Rear Brake Caliper (Lug or Radial Mounting), type 4



PHOTO No 56 Front and/or Rear Brake Caliper (Lug or Radial Mounting), type 5



PHOTO No 57 Front and/or Rear Brake Disc (Plain or Grooved, can be Cross Drilled) TYPE 1

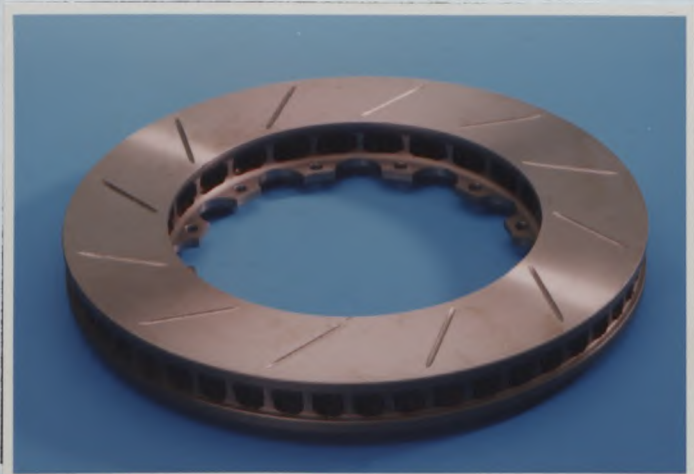


PHOTO No 58 TYPE 2

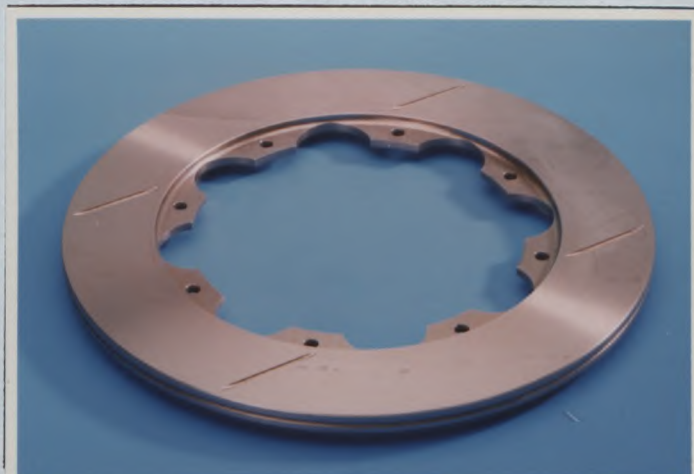


PHOTO No 59 Alternative Steering Rack

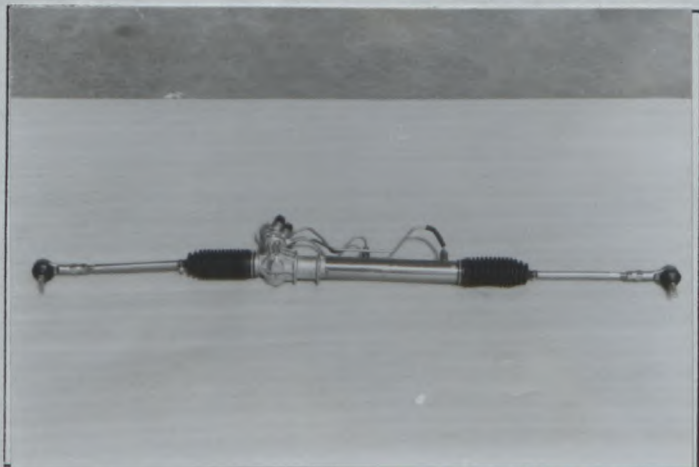
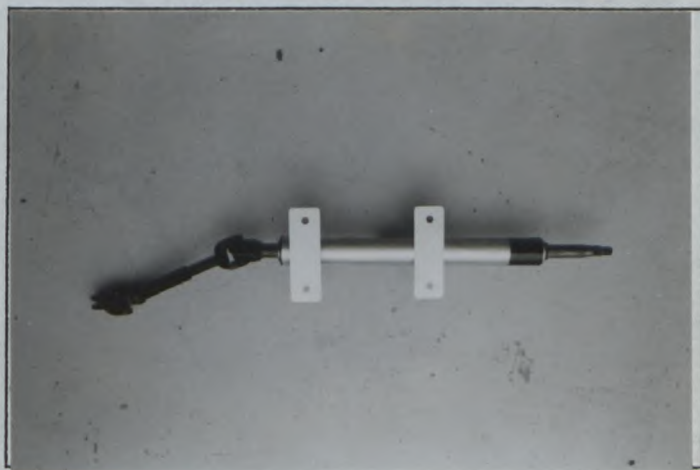


PHOTO No 60 Reinforced Steering Column



USAHASAMA PROTON-DRB
SDN BHD (USPD)

Marque
Make

PROTON SA Q TP-1.6GLI
Modèle
Model PROTON SATRIA 1.6GLi

Homologation No
A-5547

Extension No
02/02V0

PHOTO No 61 Heavy Duty Power Steering Pump, driven from Camshaft

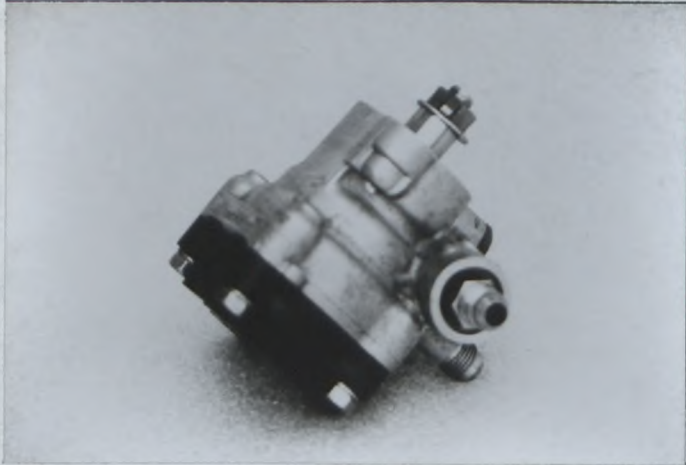


PHOTO No 62 Seat Supports

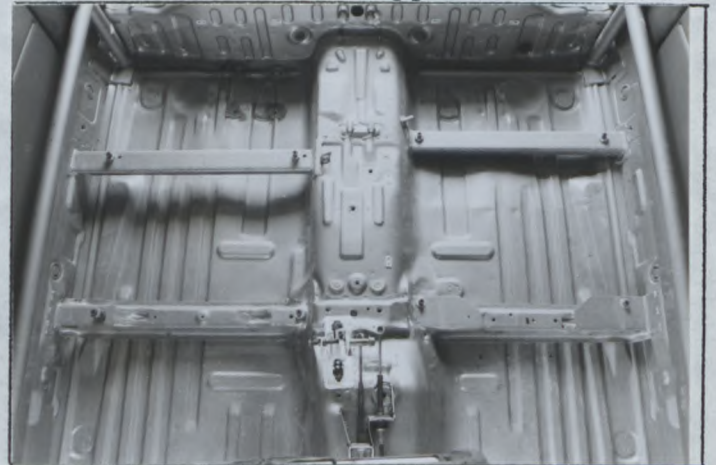


PHOTO No 63 Ventilation Foil



PHOTO No 64 Gear Lever Assy

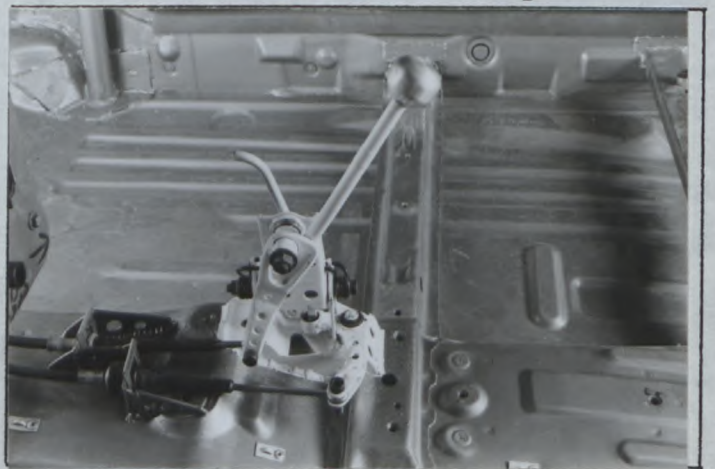


PHOTO No 65

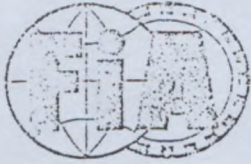
Persona-Compact-1.6GLI
Tailgate/Bumper/Lights
(E.E.C. Export)



PHOTO No 66

Persona-Compact-1.6GLI





FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

Homologation No

A - 5547

Groupe
Group A/B/N

Extension No

03/01 ET

FICHE D'EXTENSION D'HOMOLOGATION
FORM OF HOMOLOGATION EXTENSION

- ES Evolution sportive du type / Sporting evolution of the
- ET Evolution normale du type / Normal evolution of the
- VF Variante de fourniture / Supply variant
- VO Variante option / Option variant
- ER Erratum / Erratum

Véhicule: Constructeur (USPDD) USAHASAMA PROTON - DRB Modèle et type PROTON PERSONA COMPACT 1.6 MEX
 Vehicule: Manufactureur (USPDD) Model and type PROTON. SATRIA 1.6 GLI

Homologation valable à partir du 01 MARS 1997
 Homologation valid as from

Page ou ext. Page or ext.	Article Article	Description Description
Page 1	1	General
	Photo B	Number plate mounting moved to tailgate. Detail changes to tailgate, taillights and bumper.

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[Signature]
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 DE L'AUTOMOBILE
 8, place de la Concorde, 75008 Paris
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 8 bis, rue Boissy d'Anglas, 75008 Paris

Marque Usahasama Proton - DRB Modèles Proton Persona Compact 1.6
Make (USD) Model Model Proton Satria 1.6 GLi

Homologation No
A - 5547

Extension No
03/01ET

PHOTO No 2 Car seen from Rear



PHOTO No

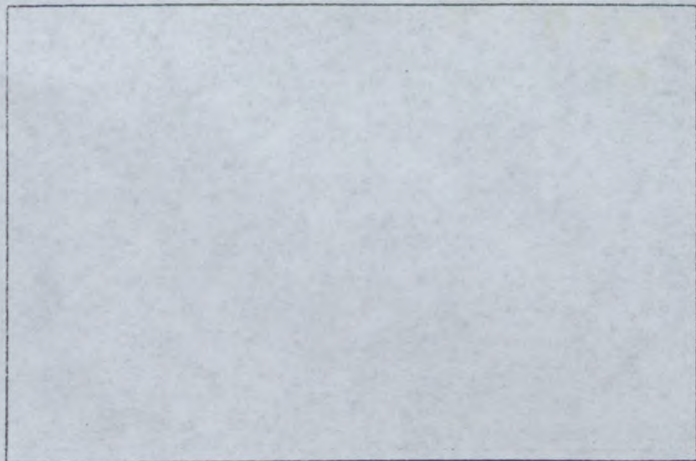


PHOTO No

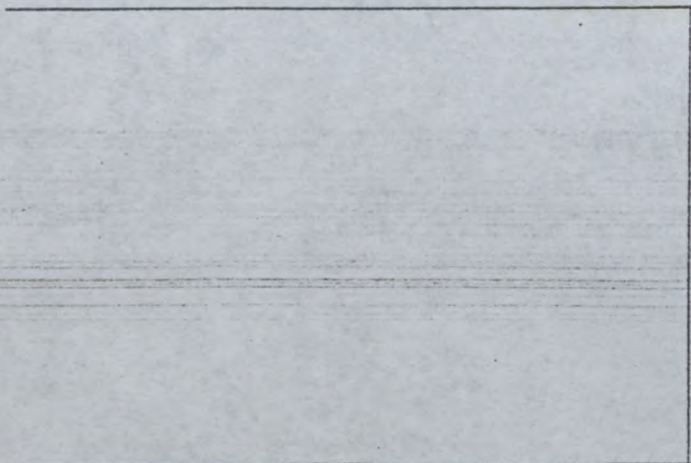


PHOTO No

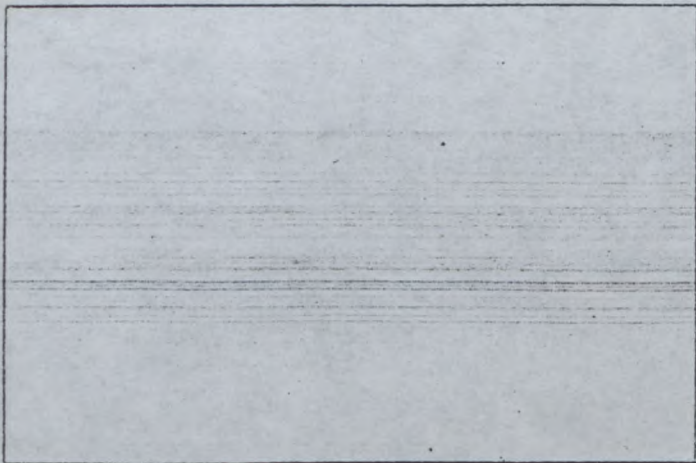


PHOTO No

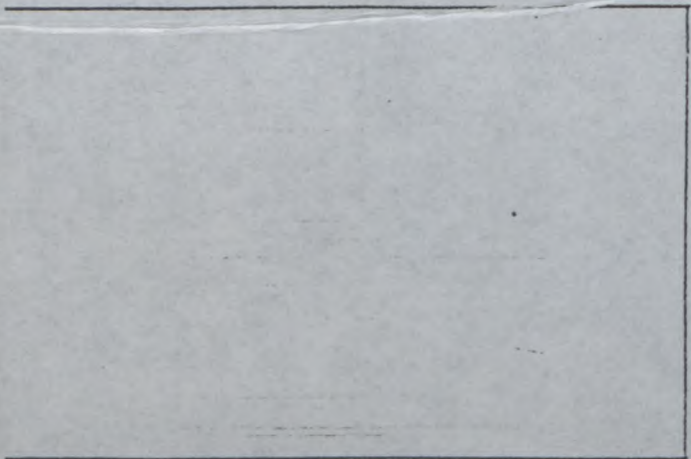
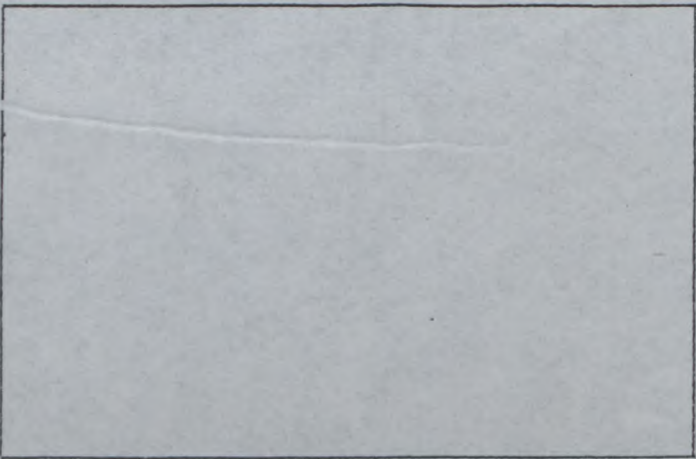


PHOTO No

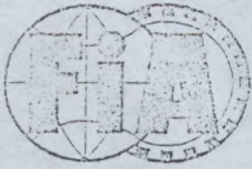


**FEDERATION INTERNATIONALE
DE L'AUTOMOBILE**

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Services Administratifs :

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FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

Homologation No

A - 5547

Groupe / Group: A/B/N

Extension No

04/03 VO

FICHE D'EXTENSION D'HOMOLOGATION
FORM OF HOMOLOGATION EXTENSION

- ES Evolution sportive du type / Sporting evolution of the
- ET Evolution normale du type / Normal evolution of the
- VF Variante de fourniture / Supply variant
- VO Variante option / Option variant
- ER Erratum / Erratum

Véhicule: Constructeur / Vehicle: Manufactureur: USAHASAMA PROTON - DRB (USPD)

Modèle et type / Model and type: PROTON PERSONA COMPACT 1.6 MEX

PROTON SATRIA 1.6 GLI

Homologation valable à partir du / Homologation valid as from: 0.1 MARS 1997

Page ou ext. / Page or ext.	Article / Article	Description / Description
	7	Suspension
	Photo 1	Alternative heavy duty front wishbone type 4
	Photo 2	Alternative heavy duty trailing arm type 4

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Marque Usahasama Proton - DRB
Make (USPD)

Modèle Proton Persona Compact 1.6
Model Proton Satria 1.5 GLi

Homologation No

A - 5547

Extension No

04/03 VO

PHOTO No 1. Alternative heavy duty
front wishbone type 4



PHOTO No

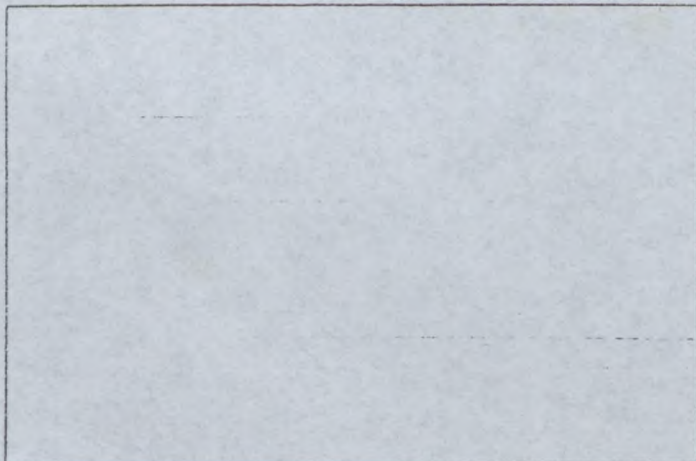


PHOTO No 2. Alternative heavy duty
trailing arm type 4



PHOTO No

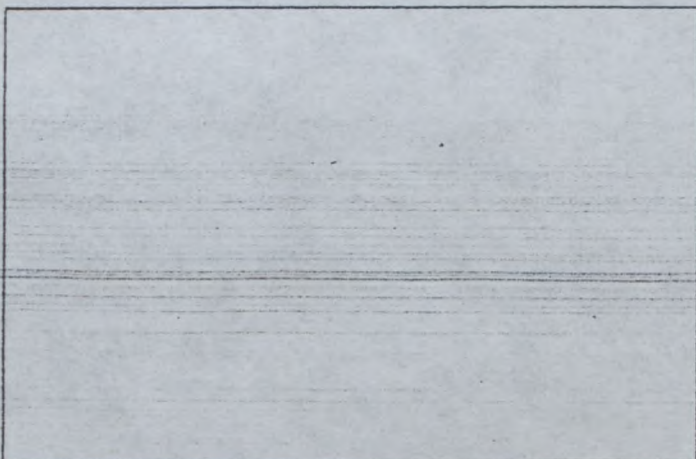


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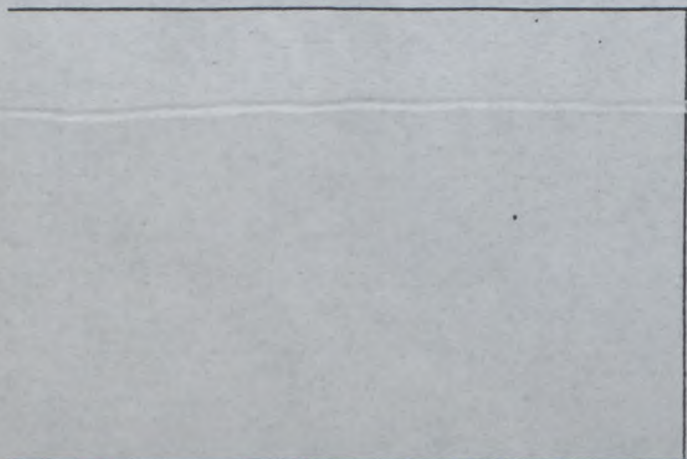
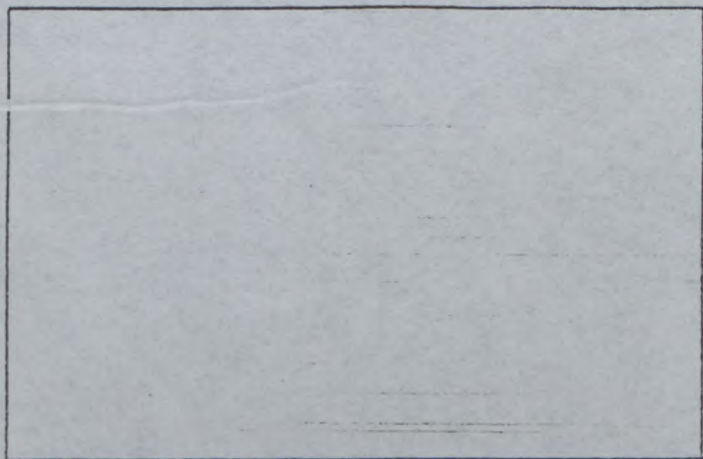


PHOTO No



**FEDERATION INTERNATIONALE
DE L'AUTOMOBILE**

8, place de la Concorde, 75008 Paris

Services Administratifs :

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FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

Homologation N°

A 5547

Extension N°

05/02 ET

Group **A / B / N**

FICHE D'EXTENSION D'HOMOLOGATION
FOR OF HOMOLOGATION EXTENSION

- | | | | | | |
|-------------------------------------|-----------|---|--------------------------|-----------|----------------------------------|
| <input type="checkbox"/> | ES | Evolution sportive du type / Sporting evolution of the type | <input type="checkbox"/> | VO | Variante option / Option variant |
| <input checked="" type="checkbox"/> | ET | Evolution normale du type / Normal evolution of the type | <input type="checkbox"/> | ER | Frratum / Erratum |
| <input type="checkbox"/> | VF | Variante de fourniture / Supply variant | | | |

Véhicule : Constructeur

Vehicle : Manufacturer

USAHASAMA PROTON - DRB SDN BDH (USPD)


Modèle et type

Model and type

PROTON SATRIA 1.6 GLi

Homologation valable à partir du
Homologation valid as from

01 SEP. 1998

Page or ext.	Article	Description
<u>8</u>	328	<u>Exhaust Manifold.</u>
	a)	<u>Material of manifold. Steel</u>
	b)	<u>Number of manifold elements. 1</u>
	c)	<u>Internal dimension of manifold exit. 50mm (-2% +4%)</u>
	i)	<u>Photo 86</u>
		
<u>10</u>	IV	<u>Manifold port drawing - cylinder head side - Unchanged.</u>

Flaherty
FEDERATION INTERNATIONALE
DE L'AUTOMOBILE
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Services Administratifs :
8 bis, rue Boissy d'Anglas, 75008 Paris



FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

Homologation N°

A 5547

Extension N°

06/04 VO

Group **A / B / N**

FICHE D'EXTENSION D'HOMOLOGATION
FOR OF HOMOLOGATION EXTENSION

- ES** Evolution sportive du type / Sporting evolution of the type
- ET** Evolution normale du type / Normal evolution of the type
- VF** Variante de fourniture / Supply variant
- VO** Variante option / Option variant
- ER** Erratum / Erratum

Véhicule : Constructeur

Vehicle : Manufacturer

USAHASAMA PROTON- DRB SDN BHD (USPD)

Modèle et type

Model and type

PROTON SATRIA 1.6 GLi

Homologation valable à partir du
Homologation valid as from

01 SEP. 1998

Page or ext.	Article	Description
<u>16/17</u>	<u>803</u>	<u>Rear brake caliper. Photo 70</u>
	<u>e)</u>	<u>Number of cylinders per wheel. 6</u>
	<u>e1)</u>	<u>Bore. 22.2mm / 25.4mm / 30.2mm +/-1mm</u>
	<u>g1)</u>	<u>Number pads per wheel. 2</u>
	<u>g2)</u>	<u>Number of calipers per wheel. 1</u>
	<u>g3)</u>	<u>Caliper material. Aluminium Alloy</u>
	<u>g8)</u>	<u>Overall length of pad. 99mm +/- 1.5mm</u>
<u>15</u>	<u>701</u>	<u>Upated front wishbone mounting. Photo 71</u>
<u>15</u>	<u>701</u>	<u>Reinforced trailing arm with caliper mounting. Photo 72</u>
<u>16</u>	<u>803</u>	<u>Front brake caliper mounting. Photo 73</u>
<u>15</u>	<u>701</u>	<u>Upated alternative rear hub. Photo 74</u>
<u>16</u>	<u>803</u>	<u>Front and rear brake disc mounting bell. Photo 75</u>
<u>16/17</u>	<u>803</u>	<u>Rear brake disc. Photo 76</u>
	<u>q4)</u>	<u>Thickness of new disc. 7mm - 25.4mm</u>
	<u>q5)</u>	<u>External diameter of disc. 192mm - 280mm</u>
	<u>q6)</u>	<u>External diameter of pads rubbing surface. 191mm- 279mm</u>
	<u>q7)</u>	<u>Internal diameter of pads rubbing surface. 160mm- 250mm</u>
	<u>q9)</u>	<u>Ventilated disc. Optional</u>

FEDERATION INTERNATIONALE
DEL'AUTOMOBILE

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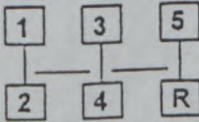
Marque
Make **PROTON**

Modèle
Model **SATRIA 1.6 GLi**

A 5547

Extension N°

06/05/10
06/04V0

Page or ext.	Article	Description																					
<u>17</u>	<u>803</u> <u>h1)</u> <u>h2)</u> <u>h3))</u>	<u>Handbrake. Photo 77</u> <u>Control system. Hydraulic.</u> <u>Location of lever. Centre floor.</u> <u>On which wheels. Rear.</u> <u>Cylinder diameter. 15mm - 23mm</u>																					
<u>15</u>	<u>707</u>	<u>Heavy duty front strut. Photo 78</u>																					
<u>15</u>	<u>707</u>	<u>Heavy duty rear strut. Photo 79</u>																					
<u>19</u>	<u>902</u>	<u>Roof air vent. Photo 80 (Valid for rallies only)</u>																					
<u>15</u>	<u>701</u>	<u>Upated rear transverse link. Photo 81</u>																					
<u>15</u>	<u>701</u>	<u>Upated rear transverse link. Photo 82</u>																					
<u>14</u>	<u>606</u>	<u>Heavy duty drive shaft. Photo 83</u>																					
<u>15</u>	<u>701</u>	<u>Reinforced front wishbone. Photo 84</u>																					
<u>14</u>	<u>605</u> <u>b)</u> <u>c)</u>	<u>Alternative final drive ratios.</u> <u>Ratio. 3.066 : 3.200 : 3.357 : 3.692 : 4.083</u> <u>Teeth. 15/46 : 15/48 : 14/47 : 13/48 : 12/49</u>																					
<u>12</u>	<u>601</u>	<u>Alternative final drive reduction gears.</u> <u>Ratio 1.444 : 1.500 : 1.562 : 1.625 : 1.733 : 1.800</u> <u>Teeth. 18/26 : 18/27 : 16/25 : 16/26 : 15/26 : 15/27</u>																					
<u>13</u>	<u>603</u> <u>e)</u>	<u>Optional close ratio straight cut gear set</u> <u>Ratios</u> <table border="1" data-bbox="338 1422 790 1653"> <thead> <tr> <th></th> <th>Number of teeth</th> <th>Ratio</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>13 x 30</td> <td>2.308</td> </tr> <tr> <td>2</td> <td>16 x 27</td> <td>1.688</td> </tr> <tr> <td>3</td> <td>20 x 26</td> <td>1.300</td> </tr> <tr> <td>4</td> <td>22 x 24</td> <td>1.091</td> </tr> <tr> <td>5</td> <td>22 x 21</td> <td>0.955</td> </tr> <tr> <td>R</td> <td>12 x 26 x 37</td> <td>3.083</td> </tr> </tbody> </table>		Number of teeth	Ratio	1	13 x 30	2.308	2	16 x 27	1.688	3	20 x 26	1.300	4	22 x 24	1.091	5	22 x 21	0.955	R	12 x 26 x 37	3.083
	Number of teeth	Ratio																					
1	13 x 30	2.308																					
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4	22 x 24	1.091																					
5	22 x 21	0.955																					
R	12 x 26 x 37	3.083																					
	<u>f)</u>	<u>Gear change gate</u> 																					

**FEDERATION INTERNATIONALE
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Marque
Make **PROTON**

Modèle
Model **SATRIA 1.6 GLi**

Homologation N°

A 5547

Extension N°

06 / 04 V0

PHOTO N° 70

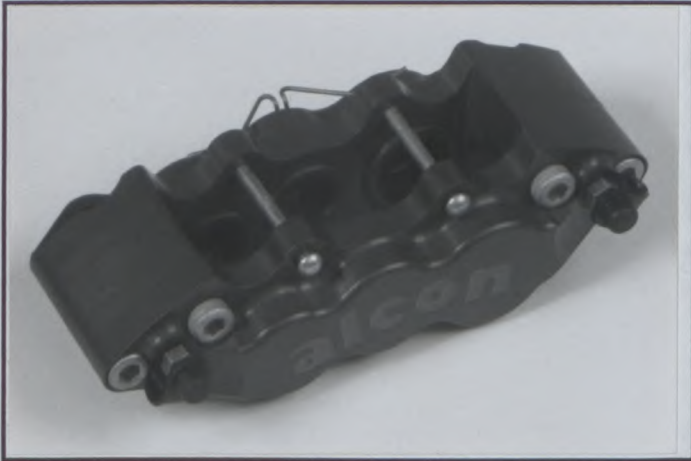


PHOTO N° 71



PHOTO N° 72



PHOTO N° 73



PHOTO N° 74

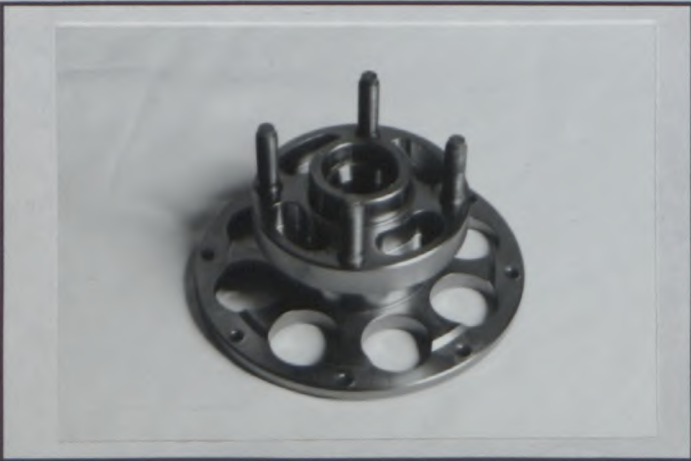
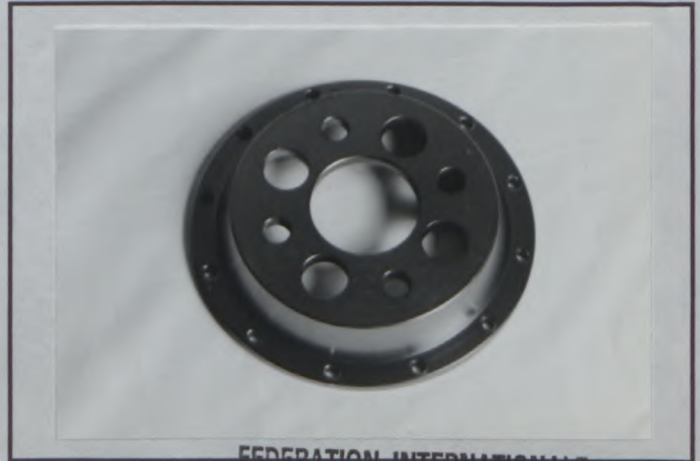


PHOTO N° 75



**FEDERATION INTERNATIONALE
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Marque
Make **PROTON**

Modèle
Model **SATRIA 1.6 GLi**

Homologation N°

A 5547

Extension N°

06/04V0

PHOTO N° 76



PHOTO N° 77



PHOTO N° 78

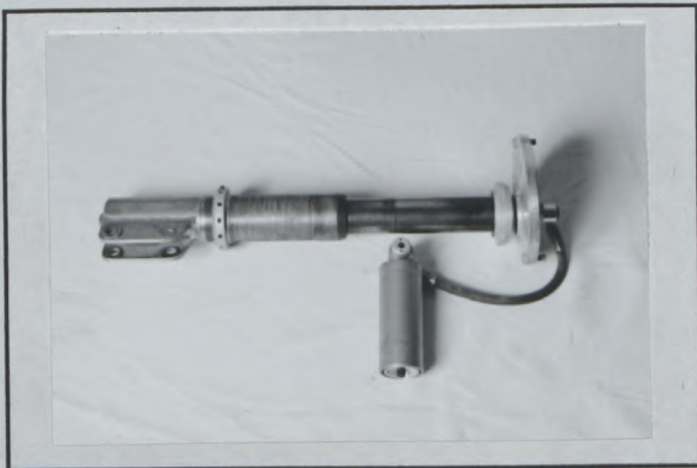


PHOTO N° 79



PHOTO N° 80

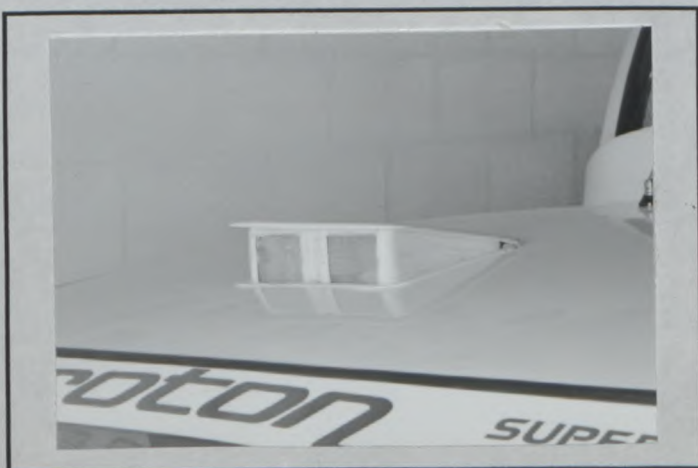


PHOTO N° 81



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Marque
Make **PROTON**

Modèle
Model **SATRIA 1.6 GLi**

Homologation N°

A 5547

Extension N°

06/04V00

PHOTO N° 82



PHOTO N° 83



PHOTO N° 84



PHOTO N°

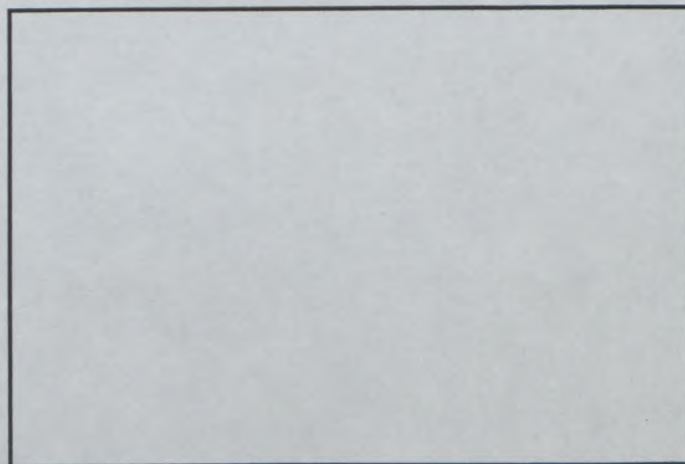


PHOTO N°

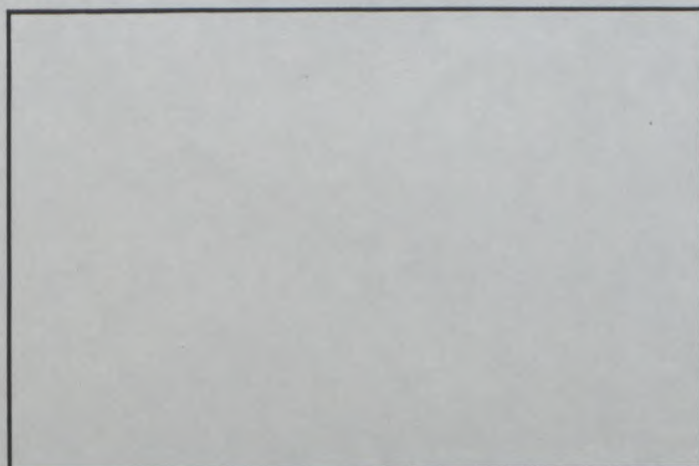
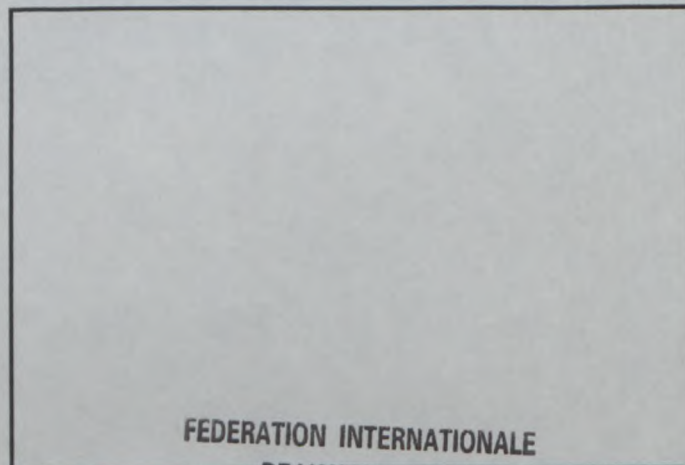


PHOTO N°



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FEDERATION INTERNATIONALE DE L'AUTOMOBILE

Homologation N°

A - 5547

Grupa
Group **A**

Extension N°

07 / 01 VK

FICHE D'EXTENSION D'HOMOLOGATION FORM FOR HOMOLOGATION EXTENSION

VK Variante Kit / Kit Variant

Homologation valable à partir du
Homologation valid as from

01 MAI 2000

A) Voiture vue de 3/4 avant
Car seen front 3/4 front



B) Voiture vue de 3/4 arrière
Car seen from 3/4 rear



1. GENERALITES / GENERAL

102. Dénomination(s) commerciale(s) - Modèle et type
Commercial name(s) - Model and type

PROTON SATRIA 1.6 GLI

103. Cylindrée
Cylinder capacity **1597.4 cm³**

2. DIMENSIONS, POIDS / DIMENSIONS, WEIGHT

203. Largeur hors-tout
Overall width **1720 mm**

Endroit de mesure
Where measured **Front wheel centre**

204. Largeur de carrosserie
Width of bodywork

a) A la hauteur de l'axe avant
At front axle **1720 mm**

b) A la hauteur de l'axe arrière
At rear axle **1708 mm**

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Marque
Make **PROTON**

Modèle
Model **SATRIA**

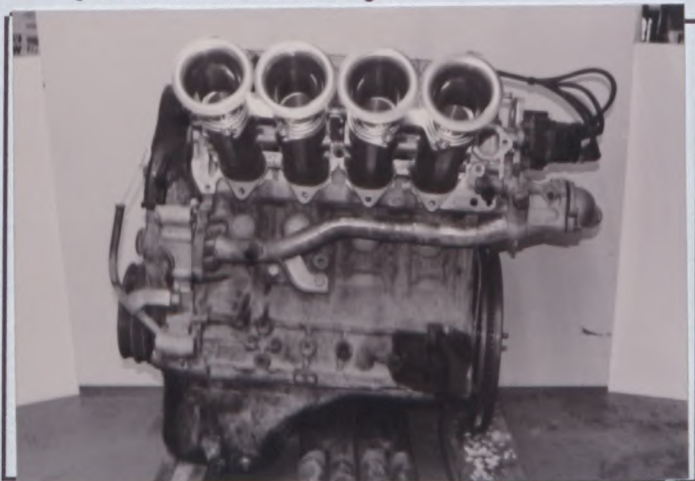
A - 5547

Extension N°

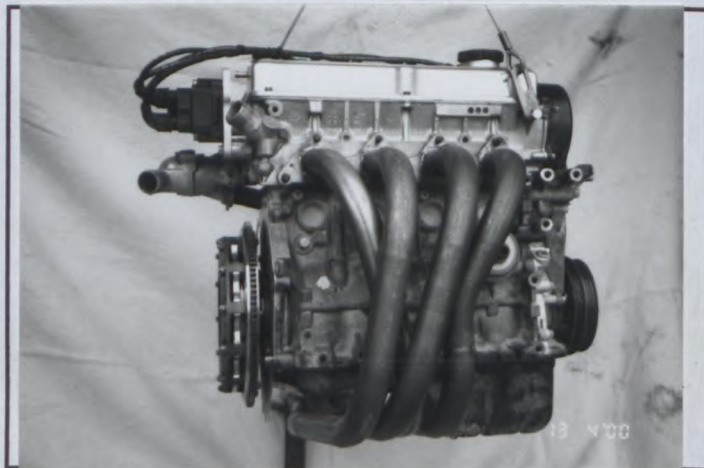
07 / 01 VK

3. MOTEUR / ENGINE

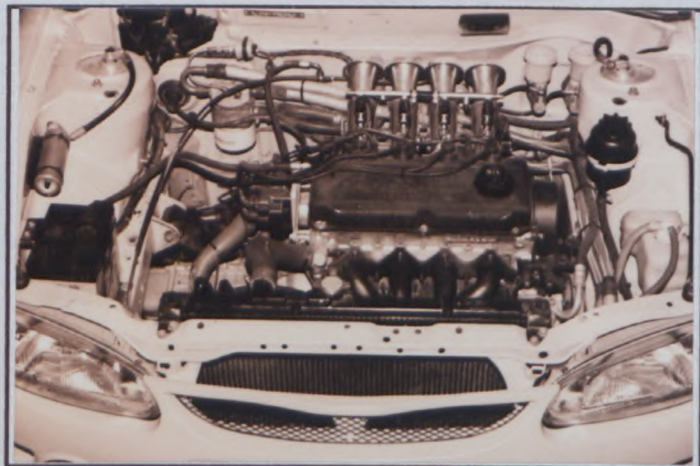
C) Profil droit du moteur déposé
Right hand view of dismantled engine



B) Profil gauche du moteur déposé
Left hand view of dismantled engine



E) Moteur dans son compartiment
Engine in its compartment



307. Cylindrée
Cylinder capacity

a) Unitaire
unitary **399.35** cm³

b) Totale
Total **1597.4** cm³

c) Totale max. autorisée
Max. total allowed **1599.4** cm³

313. Chemises :
Sleeves :

a) oui
yes non
no

c) humides
wet sèches
dry

314. Alésage
Bore **81.0** mm

315. Alésage maximum autorisé
Maximum bore allowed **81.05** mm

316. Course
Stroke **77.5** mm

Marque
Make **PROTON**

Modèle
Model **SATRIA**

Homologation N°

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323. Alimentation par carburateur :
Fuel feed by carburettor :

a) Nombre de carburateurs
Number of carburettors **XXXX**

b) Type
Type **XXXX**

c) Marque et modèle
Make and model **XXXX**

d) Nombre de passages de gaz par carburateur
Number of mixture passages per carburettor **XXXX**

e) Diamètre maximum de la sortie de gaz du carburateur
Maximum diameter of the carburettor mixture exit port **XXXX** mm

f) Diamètre du diffuseur au point d'étranglement maximum
Diameter of the venturi at the narrowest point **XXXX** +/- 0.25 mm

324. Alimentation par injection :
Fuel feed by injection :

a) Marque
Make **Beattie**

b) Modèle
Model **Series 1**

c) Mode de dosage du carburant :
Kind of fuel measurement :

<input type="checkbox"/> mécanique mechanical	<input checked="" type="checkbox"/> électronique electronical	<input type="checkbox"/> hydraulique hydraulic
--	--	---

d) Dimensions du conduit d'admission au niveau du papillon ou de la guillotine
Dimensions of intake pipe at the throttle or slide location **4 x 42.0** +/- 0.25 mm

e) Nombre de sorties effectives de carburant
Number of effective fuel outlets **8**

f) Position des injecteurs
Position of injectors

f1)

<input checked="" type="checkbox"/> Collecteur Manifold	<input type="checkbox"/> Culasse Cylinderhead
--	--

**Four injectors located in intake manifold.
Optional four injectors located in air filter box.**

Marque
Make **PROTON**

Modèle
Model **SATRIA**

A - 5547

Extension N°

07 / 01 VK

- g) Capteurs du système d'injection
Sensors of injection system

(See location scheme on page 6)

Engine position sensor

—

—

- h) Actionneurs du système d'injection
Actuators of injection system

—

Injectors (4 + 4)

—

—

- H) Carburateur / Système d'injection
Carburator / Injection system



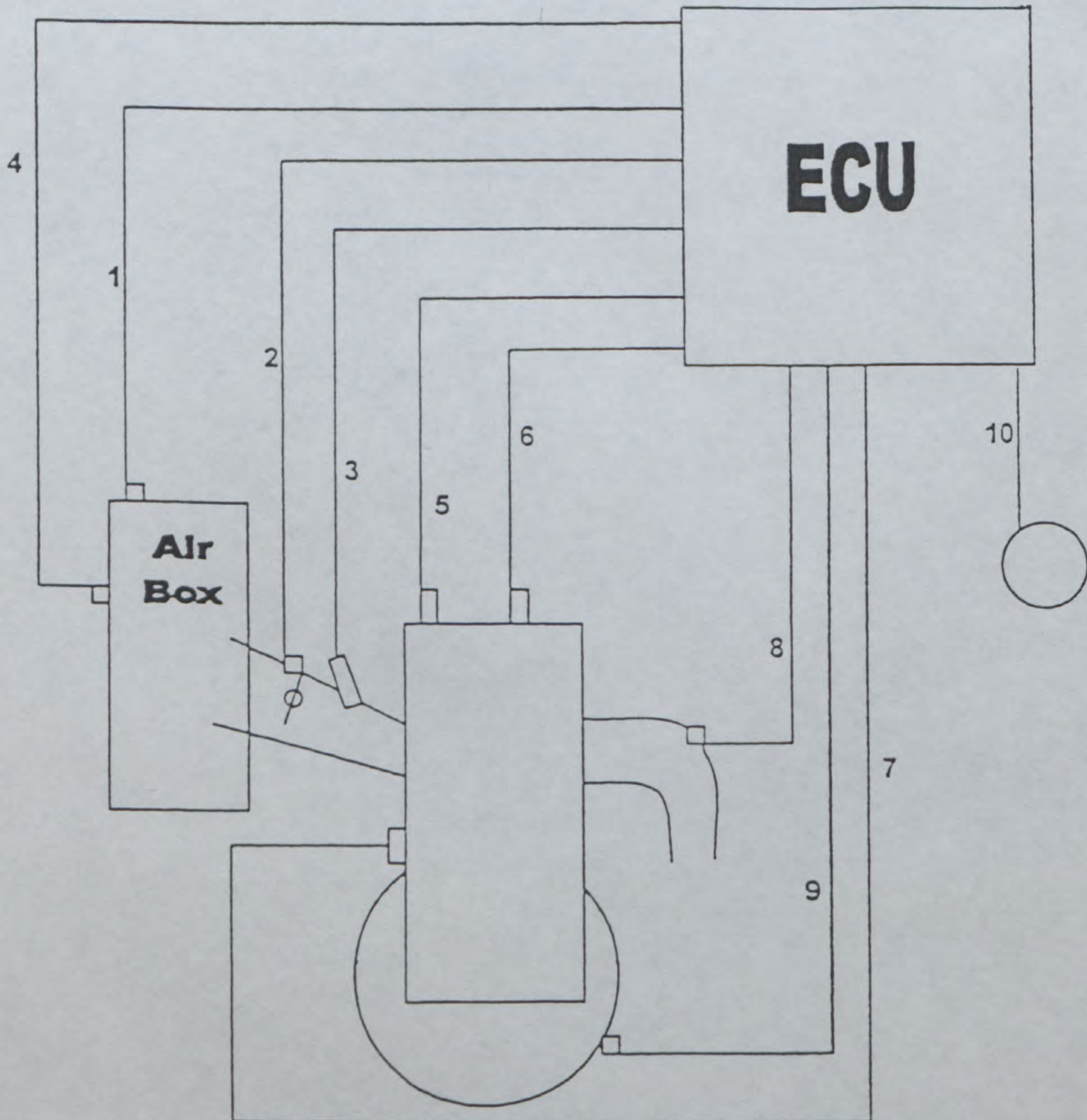
A - 5547

Marque
Make **PROTON**

Modèle
Model **SATRIA**

07 / 01 VK

XIV) LOCALISATION DES CAPTEURS ET ACTIONNEURS / LOCATION OF SENSORS AND ACTUATORS :



1. Air Temperature Sensor.
2. Throttle Potentiometer.
3. Fuel Injectors.
4. Additional Four Fuel Injectors.
5. Water Temperature.

6. Ignition Signal.
7. Knock Sensor.
8. Lambda Sensor.
9. Engine Position Sensor.
10. Barometric Pressure Sensor.

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Marque
Make **PROTON**

Modèle
Model **SATRIA**

A - 5547

Extension N°

07 / 01 VK

327. Admission : a) Matériau du collecteur
Intake : Material of manifold **Aluminium alloy**

b) Nombre d'éléments du collecteur
Number of manifold elements **2**

d) Diamètre maximum de soupape
Maximum diameter of the valve ___ mm

e) Diamètre de tige de soupape dans guide
Diameter of the valve stem in guide ___ + 0 / - 0.2 mm

f) Longueur de soupape
Valve length ___ +/- 1.5 mm

**UNIQUEMENT POUR LES MOTEURS A DEUX SOUPAPES PAR CYLINDRE (UNE D'ADMISSION + UNE D'ECHAPPEMENT)
ONLY FOR ENGINES WITH TWO VALVES PER CYLINDER (ONE FOR INTAKE + ONE FOR EXHAUST)**

328. Echappement : a) Matériau du collecteur
Exhaust : Material of manifold **Steel**

b) Nombre d'éléments du collecteur
Number of manifold elements **2**

c) Dimensions intérieures de sortie collecteur
Internal dimensions of manifold exit **61 +/- 2** mm

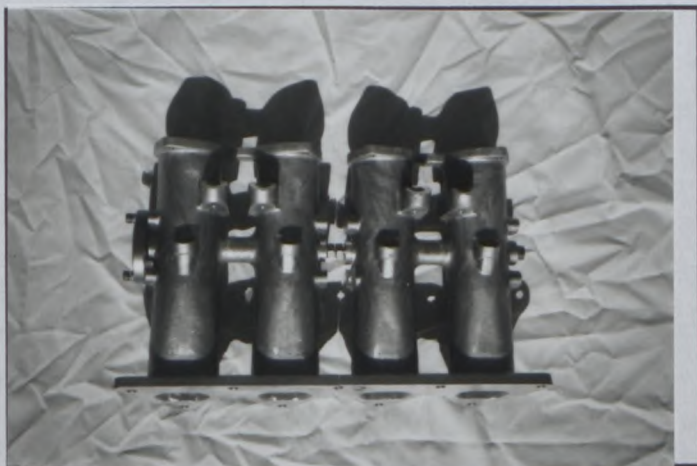
e) Diamètre maximum de soupape
Maximum diameter of the valve ___ mm

f) Diamètre de tige de soupape dans guide
Diameter of the valve stem in guide ___ + 0 / - 0.2 mm

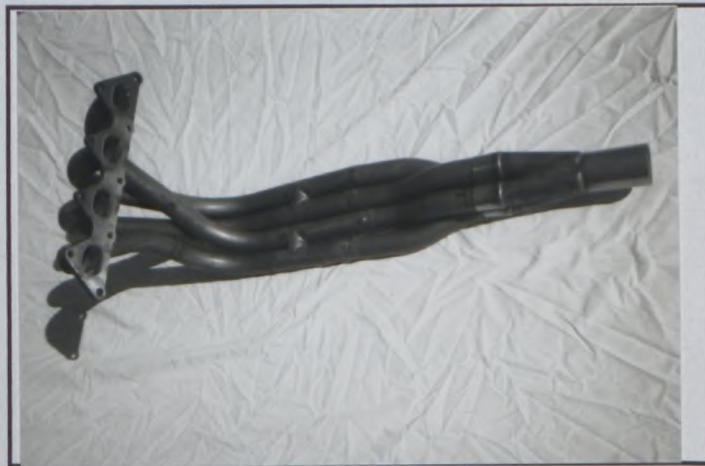
g) Longueur de soupape
Valve length ___ +/- 1.5 mm

**UNIQUEMENT POUR LES MOTEURS A DEUX SOUPAPES PAR CYLINDRE (UNE D'ADMISSION + UNE D'ECHAPPEMENT)
ONLY FOR ENGINES WITH TWO VALVES PER CYLINDER (ONE FOR INTAKE + ONE FOR EXHAUST)**

I) Collecteur d'admission
Intake manifold



J) Collecteur d'échappement
Exhaust manifold



Marque
Make **PROTON**

Modèle
Model **SATRIA**

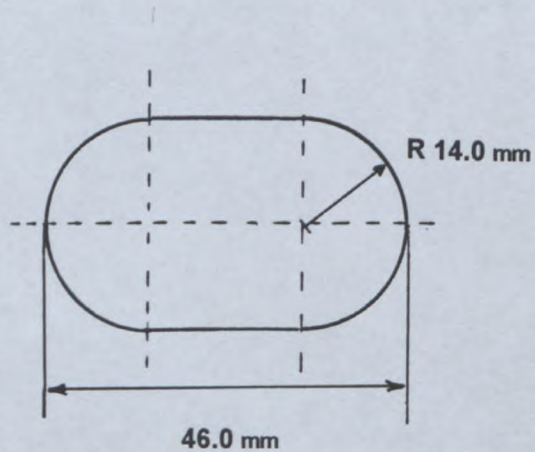
A - 5547

Extension N°

07 / 01 VK

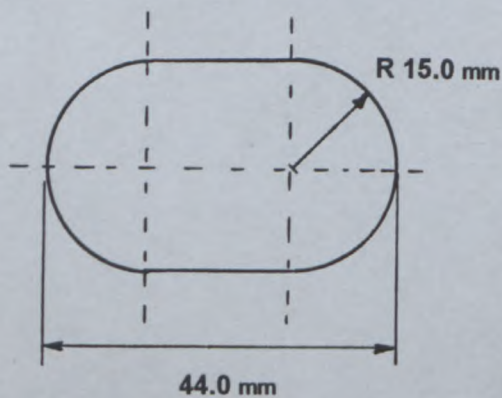
Dessins des orifices du moteur - tolérances sur les dimensions : -2%, +4%
Drawings of engine ports - tolerances on dimensions : -2%, +4%

II) Collecteur, côté culasse / Manifold, cylinderhead side



A
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M
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S
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IV) Collecteur, côté culasse / Manifold, cylinderhead side



E
C
H
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P
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Extension N°

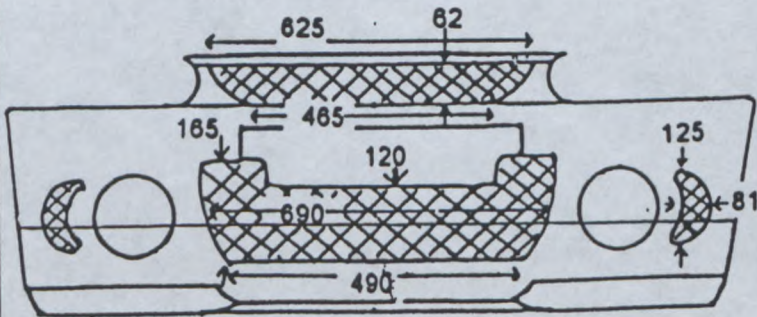
07/01VK

Marque
Make **PROTON**

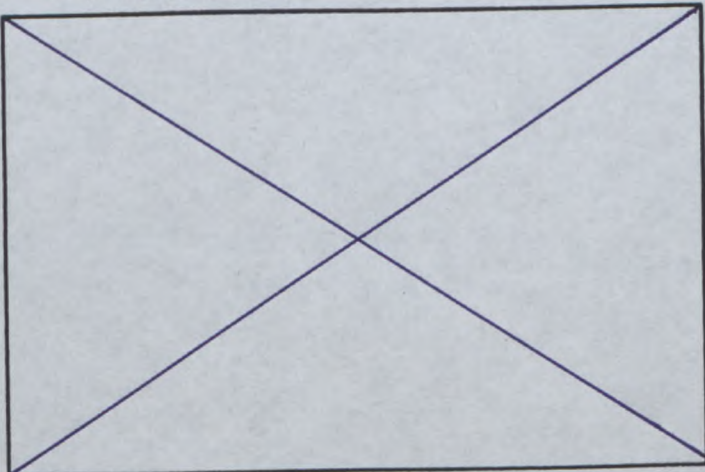
Modèle
Model **SATRIA**

9. CARROSSERIE / BODYWORK

XVI) DISPOSITIF AERODYNAMIQUE AVANT VU DE FACE AVEC DIMENSIONS DES OUVERTURES :
FRONT AERODYNAMIC DEVICE SEEN FROM THE FRONT WITH DIMENSIONS OF OPENINGS :



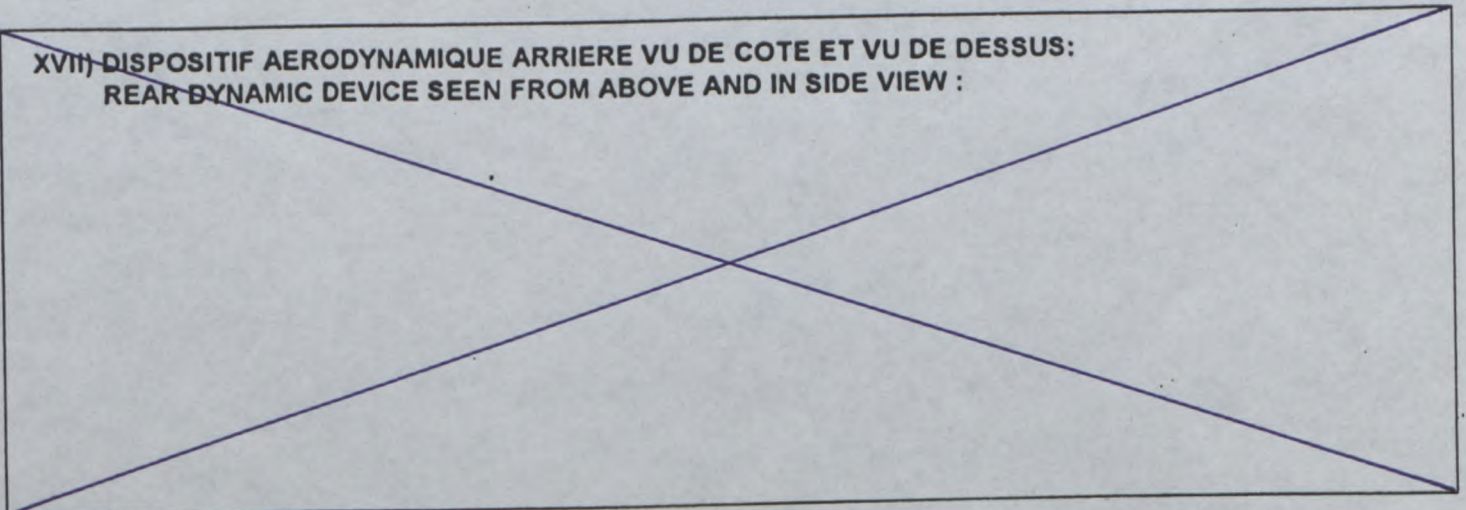
A1) Ouverture dans le capot moteur
Opening in engine bonnet



A2) Pare-chocs arrière / Bouclier arrière
Rear bumper



XVII) DISPOSITIF AERODYNAMIQUE ARRIERE VU DE COTE ET VU DE DESSUS:
REAR DYNAMIC DEVICE SEEN FROM ABOVE AND IN SIDE VIEW :



Marque
Make **PROTON**

Modèle
Model **SATRIA**

Homologation N°

A - 5547

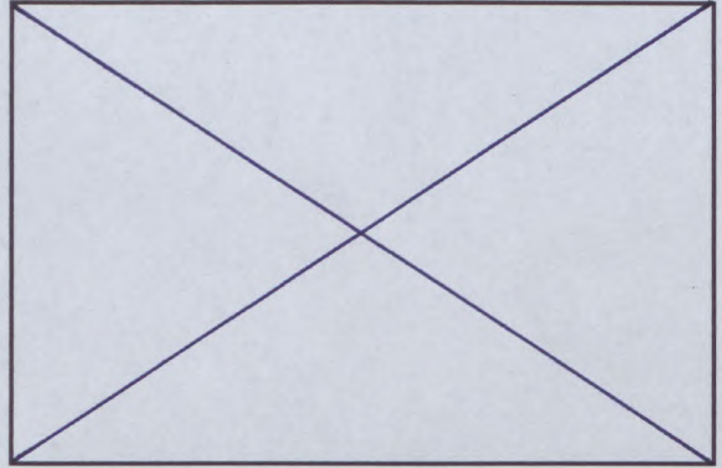
Extension N°

07 / 01 VK

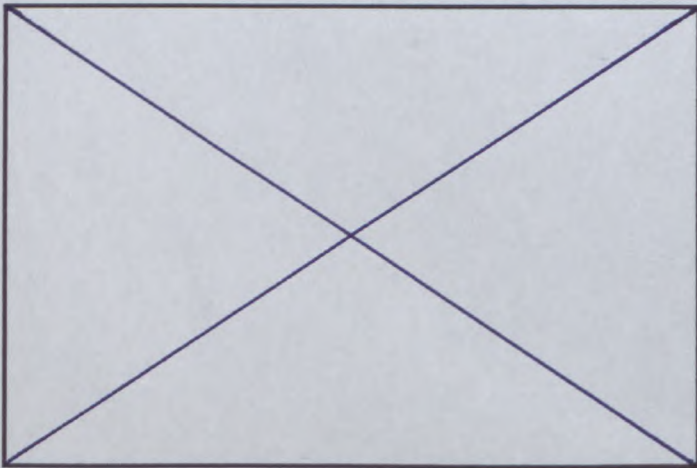
A3) Aile avant
Front wing



A4) Passage de roue avant avec les pièces montées
Front wheel arch with assembled parts



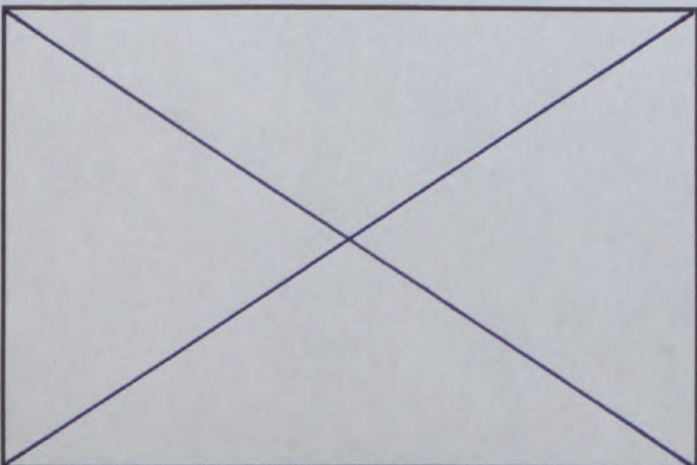
A5) Pièces démontées du passage de roue avant
Front wheel arch dismantled parts



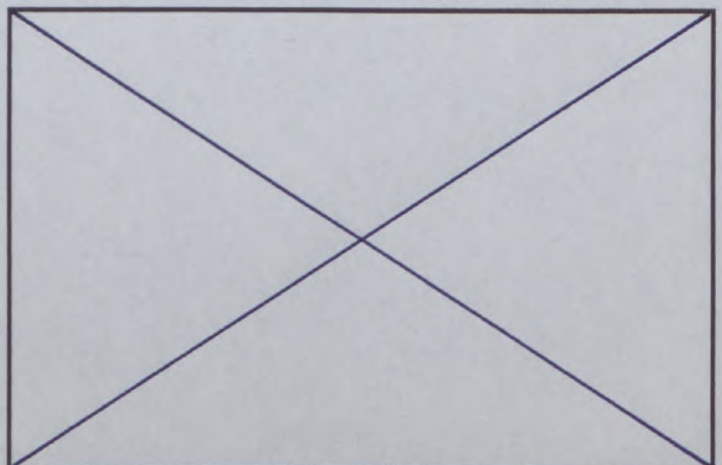
A6) Aile arrière
Rear wing



A7) Passage de roue arrière avec les pièces montées
Rear wheel arch with assembled parts



A8) Pièces démontées du passage de roue arrière
Rear wheel arch dismantled parts



Marque
Make PROTON

Modèle
Model SATRIA

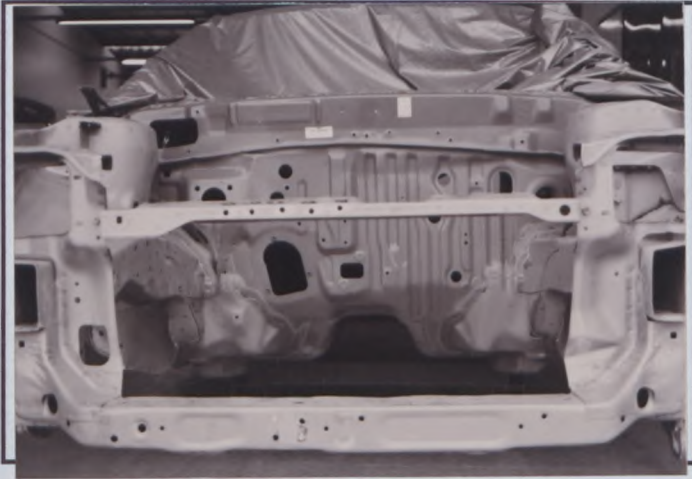
Homologation N°

A - 5547

Extension N°

07 / 01 VK

- A9) Vue frontale de la modification de traverse supérieure ainsi que des renforts éventuels.
Frontal view of the upper cross member modification and of any reinforcements.



Marque
Make **PROTON**

Modèle
Model **SATRIA**

A - 5547

Extension N°

07 / 01 VK

INFORMATIONS COMPLEMENTAIRES / COMPLEMENTARY INFORMATION

The VK kit comprises of engine components and bodywork components which can be used together or as three separate kits.

Kit (a) - Body parts.

(b) - Engine:- Crankshaft - Connecting Rods - Flywheel.

(c) - Engine:- Inlet manifold - Exhaust manifold.

(Engine kit (c) can be used with four or eight injectors)

<u>Description</u>	<u>Material</u>	<u>Year / Part Number</u>
--------------------	-----------------	---------------------------

BODY KIT

Front Bumper	Plastic	2000 / PK 0101
Rear Bumper	Plastic	2000 / PK 0102
L/H Front wheel arch	Plastic	2000 / PK 0103
R/H Front wheel arch	Plastic	2000 / PK 0104
L/H Rear wheel arch	Plastic	2000 / PK 0105
R/H Rear wheel arch	Plastic	2000 / PK 0106

ENGINE KIT

Crankshaft	Steel	2000 / PK 601
Connecting Rod	Steel	2000 / PK 602
Flywheel	Steel	2000 / PK 603
Inlet manifold	Aluminium	2000 / PK 604
Exhaust Manifold	Steel	2000 / PK 605

Body and Engine kits can only be fitted by :- Harry Hockly Motorsport Ltd.,
Unit 7 Dyffryn Industrial Estate
Pool Road
Newtown
Powys
SY16 3AJ

Harry Hockly Motorsport Ltd will issue an original certificate of conformity to the recipient of the mounted kits.

The certificate of conformity must be presented for any use of the car equipped with these kits.

The fitting of the body kit should not adversely effect the crash resistance of the car, when other rework associated with the build of a rally car is taken into account.

The VK identification number will be located on the chassis plate of each vehicle.



FICHE COMPLEMENTAIRE D'HOMOLOGATION EN GROUPE 'N' COMPLEMENTARY HOMOLOGATION FORM IN GROUP 'N'

Vehicule: Constructeur USAHASAMA PROTON-DRB Modèle et type PROTON SATRIA 1.6GLi
Vehicle: Manufacturer SDN BHD (USPD) Model and type

Homologation valable à partir du 01 JAN. 1996
Homologation valid as from

IMPORTANT:

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

IMPORTANT:

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

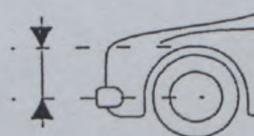
1. GENERALITES / GENERAL

103. Cylindrée 1597,4 cm3 Cylindrée corrigée X X X X x X X X = X X X X cm3
Cylinder capacity Corrected cylinder capacity

2. DIMENSIONS, POIDS / DIMENSIONS, WEIGHT

201. Poids minimum 940 kg
Minimum weight

205. Hauteur minimum centre moyeu de roue / Avant 365 mm
ouverture du passage de roue Front
Minimum height center hub / Arrière 360 mm
wheel arch opening Rear



207. Voie maximum a) Avant 1450 mm b) Arrière 1460 mm
Maximum track Front Rear

Handwritten signature

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Marque
Make

Modèle
Model

PROTON SATRIA 1.6GLi

N-5547/

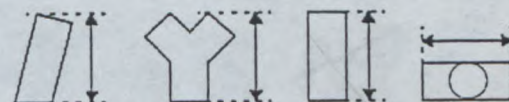
3. MOTEUR / ENGINE

302. Nombre de supports 1 308. Volume minimum total d'une chambre de combustion 44.3 cm³
Number of supports Total minimum volume of a combustion chamber

309. Volume minimum d'une chambre de combustion dans la culasse 45.82 cm³
Minimum volume of a combustion chamber in the cylinder head

310. Rapport volumétrique maximum (par rapport à l'unité) 10 :1
Maximum compression ratio (in relation with the unit)

311. Hauteur minimum du bloc-cylindres 243.5 mm selon dessin :
Minimum height of the cylinder block according to drawing :



313. Chemises X X X X
Sleeves Material

317. Piston Aluminum alloy
Piston Material

b) Nombre de segments 3 c) Poids minimum 270 g
Number of rings Minimum weight

d) Distance de la médiane de l'axe au sommet du piston 35.05 +/-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 0.0 +/-0.15 mm
Distance (+/-) between the top of the piston at TDC and the gasket plane of the cylinder block

f) Volume de l'évidement du piston 12.7 +/-0.5 cm³
Piston groove volume

AA) Piston
Piston



319. Vilebrequin Ø 45.0 mm
Crankshaft i) Diamètre maximum des manetons
Maximum diameter of crank pins

321. Culasse 119 mm
Cylinderhead c) Hauteur minimum
Minimum height

d) Endroit de la mesure Sealing surface cylinder block and head-sealing surface
Where measured valve cover

322. Epaisseur du joint de culasse serré 1.2 +/-0.2 mm
Thickness of tightened cylinderhead gasket

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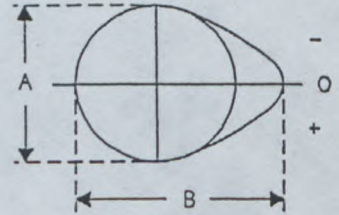
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Marque
Make

N-5547

325. Arbre à cames e) Diamètre des paliers $\phi 45.0 - 0.060$
Camshaft Diameter of bearings $- 0.075$ m m

g) Dimensions de la came Admission A = 32.0 +/-0.1 mm
Cam dimensions Inlet B = 37.783 +/-0.1 mm
Echappement A = 32.0 +/-0.1 mm
Exhaust B = 37.834 +/-0.1 mm



326. Distribution a) Jeu théorique de distribution admission 0.0 m m
Timing Theoretical clearance for valve timing intake échappement 0.0 m m
exhaust

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

ADMISSION / INTAKE				ECHAPPEMENT / EXHAUST			
Angle de rotation en degrés Rotation angle in degrees	Levée en mm (+/-0.2 mm) Lift in mm (+/-0.2 mm)	Angle de rotation en degrés Rotation angle in degrees	Levée en mm (+/-0.2 mm) Lift in mm (+/-0.2 mm)	Angle de rotation en degrés Rotation angle in degrees	Levée en mm (+/-0.2 mm) Lift in mm (+/-0.2 mm)	Angle de rotation en degrés Rotation angle in degrees	Levée en mm (+/-0.2 mm) Lift in mm (+/-0.2 mm)
0	5.783			0	5.834		
- 5	5.7	+ 5	5.6	- 5	5.7	+ 5	5.834
- 10	5.5	+ 10	5.5	- 10	5.6	+ 10	5.6
- 15	5.2	+ 15	5.2	- 15	5.2	+ 15	5.4
- 30	4.7	+ 30	4.1	- 30	4.4	+ 30	4.2
- 45	2.6	+ 45	2.9	- 45	2.6	+ 45	2.2
- 60	0.1	+ 60	0.7	- 60	0.3	+ 60	0.1
- 75	0	+ 75	0.1	- 75	0	+ 75	0
- 90	0	+ 90	0	- 90	0	+ 90	0
- 105	0	+ 105	0	- 105	0	+ 105	0
- 120	0	+ 120	0	- 120	0	+ 120	0
- 135	0	+ 135	0	- 135	0	+ 135	0
- 150	0	+ 150	0	- 150	0	+ 150	0

Un décalage de l'ensemble des mesures de +/- 2 degrés est accepté.
A shift of +/- 2 degrees of the whole measurement is accepted.

e) Levée maximum des soupapes
Maximum valve lift

	Levée maximum Maximum valve lift
Admission / Intake	9.40 +/-0.2 mm
Echappement / Exhaust	8.89 +/-0.2 mm

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USAHASAMA PROTON-DRB
SDN BHD (USPD)

PROTON R NA COR 1.6GLi
Modèle
Model PROTON SATRIA 1.6GLi

N-5547

327. Admission Intake h) Nombre de ressorts par soupape Number of springs per valve 1

i) Caractéristiques des ressorts :
Spring characteristics :

Sous une charge de 22.0 kg, la longueur max. du ressort est de 44.2 mm
Under a load of kg, the max. length of the spring is

k) Diamètre extérieur des ressorts ∅ 25.0 +/-0.2 mm l) Nombre de spires des ressorts 9.7
External diameter of the springs Number of spring coils

m) Diamètre du fil des ressorts ∅ 4.21 +/-0.1 mm n) Longueur libre max. des ressorts 50.9 mm
Diameter of spring wire Max. free length of the springs

328. Echappement Exhaust i) Nombre de ressorts par soupape Number of springs per valve 1

k) Caractéristiques des ressorts :
Spring characteristics :

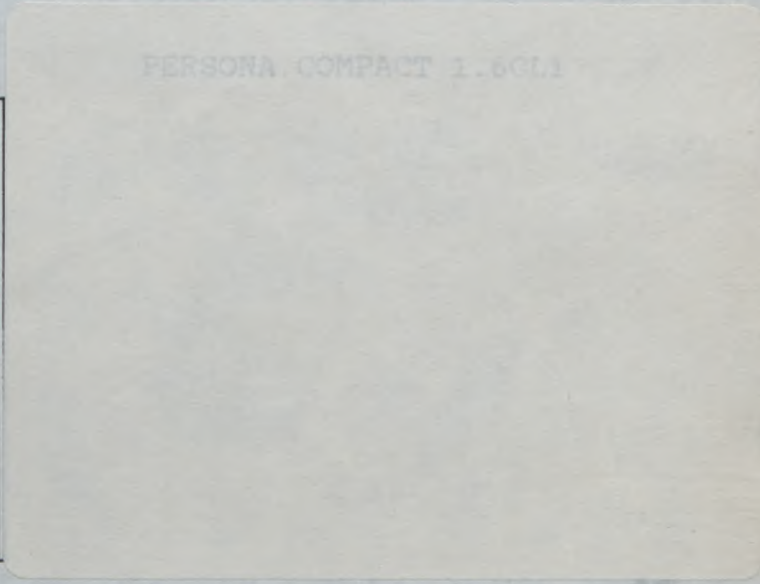
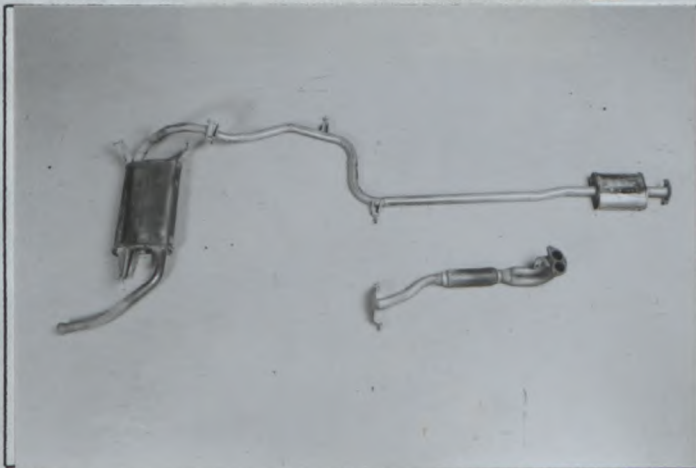
Sous une charge de 22.0 kg, la longueur max. du ressort est de 44.2 mm
Under a load of kg, the max. length of the spring is

l) Diamètre extérieur des ressorts ∅ 25.0 +/-0.2 mm m) Nombre de spires des ressorts 9.7
External diameter of the springs Number of spring coils

n) Diamètre du fil des ressorts ∅ 4.21 +/-0.1 mm o) Longueur libre max. des ressorts 50.9 mm
Diameter of spring wire Max. free length of the springs

p) Diamètre de tuyauterie entre collecteur et premier silencieux ∅ 48.6 mm +/- 5%
Diameter of pipe between manifold and first silencer

BB) Echappement complet Complete exhaust system SATRIA 1.6GLi



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329. Système anti-pollution Anti pollution system a)

oui	non
yes	no

b) Description EGR, Catalytic converter & Charcoal canister - SONA
Description

COMPACT 1.6GLi

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USAHASAMA PROTON-DRB
SDN BHD (USPD)

PROTON P... IA COI... 1.6GLI
Modèle PROTON SATRIA.1.6GLI
Model

N-5547

330. Système d'allumage Ignition system a) Type Transistorized by mapped
Type
- d) Nombre de bobines Number of coils 2
331. Système de refroidissement Cooling system Capacité Capacity 6 l
332. Ventilateur de refroidissement Cooling fan a) Nombre Number 1 b) Diamètre de l'hélice Diameter of the screw \emptyset 320 mm
- c) Matériau de l'hélice Material of the screw Plastic d) Nombre de pales Number of blades 4
- e) Type d'entraînement Type of drive Electrical f) Ventilateur débrayable Automatic cut in

oui	non
yes	no
333. Système de lubrification Lubrication system c) Capacité totale Total capacity 4.3 l d) Refroidisseur(s) d'huile Oil cooler(s)

oui	non
yes	no

 Nombre Number XXXX
- e) Emplacement du(des) refroidisseur(s) Location of the cooler(s) X X X X
- f) Type du(des) refroidisseur(s) Type of the cooler(s) X X X X

USAHASAMA PROTON-DRB
 Marque SDN BHD (USPD)
 Make

PROTON NA CC 1.6GLI
 Modèle PROTON SATRIA 1.6GLi
 Model

N-5547

4. CIRCUIT DE CARBURANT / FUEL CIRCUIT

401. Réservoir Fuel tank
- d) Capacité totale Total capacity 50 l
- e) Emplacement des orifices Filler hole locations Right-hand rear fender
402. Pompe(s) à essence Fuel pump(s)
- a)

Electrique Electrical	Mécanique Mechanical
--------------------------	---
- b) Nombre Number 1
- c) Marque et type Make and type NIPPON DENSO
- d) Emplacement Location In fuel tank
- e) Débit maximum Maximum flow 1.33 l/mn à X X X X l/mn at X X X X t/mn rpm

5. EQUIPEMENT ELECTRIQUE / ELECTRICAL EQUIPMENT

501. Batterie(s) Batterie(s)
- c) Emplacement Location ENGINE COMPARTMENT
502. Génératrice(s) Generator(s)
- a) Nombre Number 1
- b) Type Type Alternator
- c) Système d'entraînement Drive system Multi rib V belt
- d) Puissance nominale Nominal power 780 watts
503. Phares escamotables Retractable headlights
- a)

oui	non
yes	no
- b) Système de commande Control system X X X X

Marque
Make

Modèle
Model

PROTON SATRIA 1.6GLi

N-5547

6. TRANSMISSION / POWER TRAIN

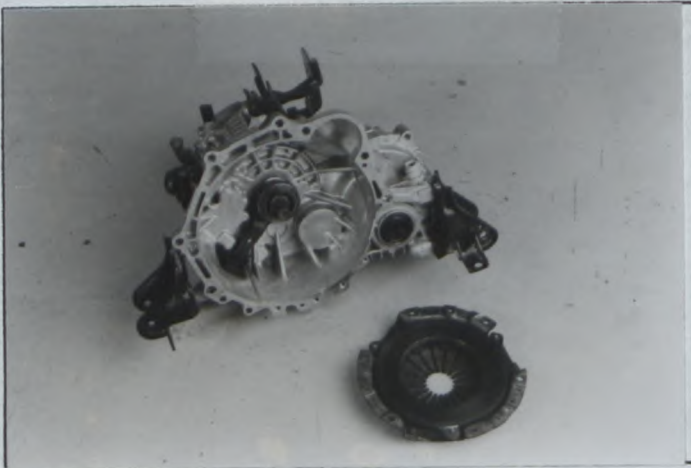
602. Embrayage
Clutch

a) Type Dry Single Plate
Type

d) Diamètre du(des) disque(s) ∅ 200
Diameter of the plate(s)

+/-2 mm

CC) Embrayage
Clutch



603. Boîte de vitesses
Gearbox

h) Refroidisseur d'huile
Oil cooler

oui	non
yes	no

Type X X X X
Type

604. Boîte de transfert / différentiel central :
Transfer box / central differential :

e) Répartition du couple :
Torque distribution :

e1) Avant X X X X %
Front

Arrière X X X X %
Rear

e2) Nombre de dents : X X X X
Number of teeth :

f) Type de limitation de différentiel central
Type of central differential limitation

X X X X

605. Couple final
Final drive

d) Type de limitation de différentiel
Type of differential limitation

f) Refroidisseur d'huile
Oil cooler

Type
Type

Avant / Front	Arrière / Rear								
<u>X X X X</u>	<u>X X X X</u>								
<table border="1"> <tr> <td>oui</td> <td>non</td> </tr> <tr> <td>yes</td> <td>no</td> </tr> </table>	oui	non	yes	no	<table border="1"> <tr> <td>oui</td> <td>non</td> </tr> <tr> <td>yes</td> <td>no</td> </tr> </table>	oui	non	yes	no
oui	non								
yes	no								
oui	non								
yes	no								
<u>X X X X</u>	<u>X X X X</u>								

Marque
Make

Modèle
Model

PROTON Satria 1.6GLi

N-5547

7. SUSPENSION / SUSPENSION

702. Ressorts hélicoïdaux Helical springs	Avant / Front	Arrière / Rear
	Steel	Steel

703. Ressorts à lames Leaf springs	Avant / Front	Arrière / Rear	
	a) Matériau de lame maîtresse Material of main leaf	X X X X	X X X X
	Matériau de 2ème lame Material of 2nd leaf	X X X X	X X X X
	Matériau de 3ème lame Material of 3rd leaf	X X X X	X X X X
	Matériau de 4ème lame Material of 4th leaf	X X X X	X X X X
	Matériau de 5ème lame Material of 5th leaf	X X X X	X X X X
	Matériau de lame auxiliaire Material of auxiliary leaf	X X X X	X X X X

704. Barres de torsion Torsion bars	Avant / Front	Arrière / Rear
	X X X X	X X X X

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USAHASAMA PROTON-DRB

PROTON Satria 1.6GLi

Marque
Make

SDN BHD (USPD)

Modèle
Model

PROTON SATRIA 1.6GLi

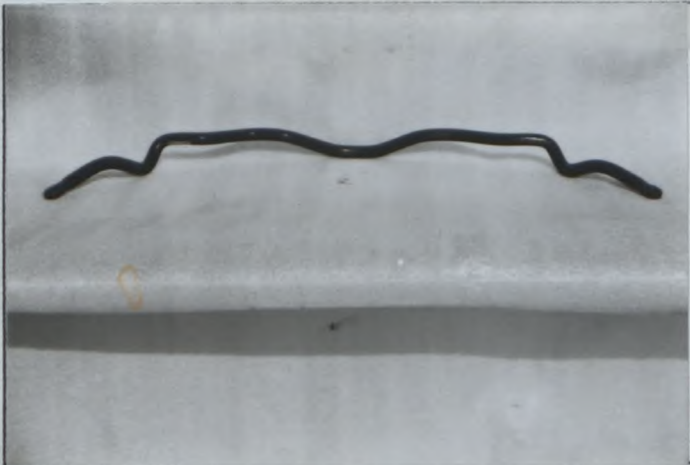
N-5547

706. Stabilisateur
Stabiliser

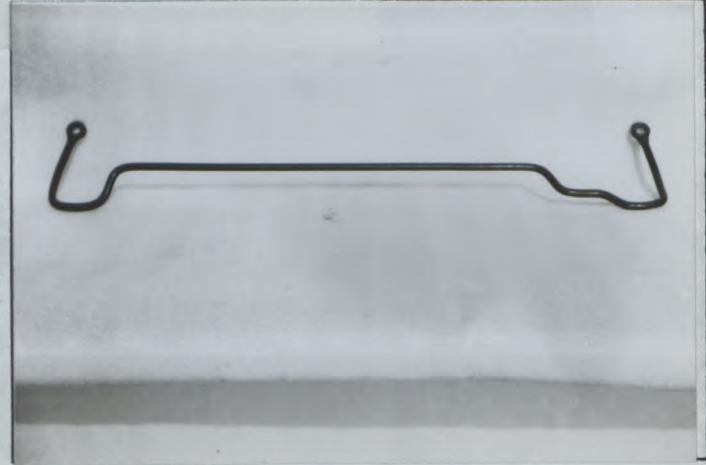
- a) Longueur efficace
Effective length
- b) Diamètre efficace
Effective diameter
- c) Matériau
Material

Avant / Front	Arrière / Rear
1310 mm +/-1%	1475 mm +/-1%
23 mm	13 mm
Steel	Steel

XI) Dessin ou photo du stabilisateur avant
Drawing or photo of front stabiliser



XI) Dessin ou photo du stabilisateur arrière
Drawing or photo of rear stabiliser



Marque
Make

Modèle
Model PROTON SATRIA 1.6GLi

N - 5547

8. TRAIN ROULANT / RUNNING GEAR

801. Roues Wheels	Avant / Front	Arrière / Rear	Secours / Spare
a) Diamètre Diameter	14 "	14 "	14 "
	∅ 355.6 mm	∅ 355.6 mm	∅ 355.6 mm
b) Largeur Width	5.5 "	5.5 "	5.5 "
	139.7 mm	139.7 mm	139.7 mm

802. Emplacement de la roue de secours
Location of the spare wheel

Rear Trunk Compartment

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



Marque
Make

Modèle
Model

PROTON SATRIA 1.6GLi

N-5547

9. CARROSSERIE / BODYWORK

901. Intérieur
Interior

c) Climatisation
Air conditioning

oui	non
yes	no

d) Sièges
Seats

d1) Type des sièges arrière
Type of rear seats

Bench

d2) Appuie-tête
Headrest

Avant / Front	Arrière / Rear								
<table border="1"> <tr> <td>oui</td> <td>non</td> </tr> <tr> <td>yes</td> <td>no</td> </tr> </table>	oui	non	yes	no	<table border="1"> <tr> <td>oui</td> <td>non</td> </tr> <tr> <td>yes</td> <td>no</td> </tr> </table>	oui	non	yes	no
oui	non								
yes	no								
oui	non								
yes	no								

d4) Siège arrière rabattable
Rear seat can be folded

oui	non
yes	no

e) Plage arrière
Rear ledge

oui	non
yes	no

e1) Matériau
Material

Paper hard board, Carpet

902. Extérieur
Exterior

n) Essuie-glace arrière
Rear wiper

oui	non
yes	no



FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

Homologation No

N - 5547

Groupe
Group A/B/N

Extension No

01/01VF

FICHE D'EXTENSION D'HOMOLOGATION
FORM OF HOMOLOGATION EXTENSION

- ES Evolution sportive du type / Sporting evolution of the
- ET Evolution normale du type / Normal evolution of the
- VF Variante de fourniture / Supply variant
- VO Variante option / Option variant
- ER Erratum / Erratum

Véhicule: Constructeur USAHASAMA PROTON - DRB
Vehicle: Manufactureur (USPD)

Modèle et type PROTON PERSONA COMPACT 1.6
Model and type MEX

PROTON SATRIA 1.6 GLI

Homologation valable à partir du 01 MARS 1997
Homologation valid as from

Ref. Groupe A 03/01 ET

Page ou ext. Page or ext.	Article Article	Description Description
	328	Exhaust
	Photo 1	Persona Compact 1.6 Mex. Catalytic exhaust system. All dimensions indentical to Satria 1.5 GLI.

[Signature]
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DE L'AUTOMOBILE
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Usahasaria Proton - DRB

Proton Persona Compact

Homologation No

Marque (USPD)

Modèle

1.6 Mex

N - 5547

Make

Model

Proton Satria 1.6 GLi

Extension No

01/01VF

PHOTO No 1. Persona Compact 1.6 Mex

Catalytic exhaust

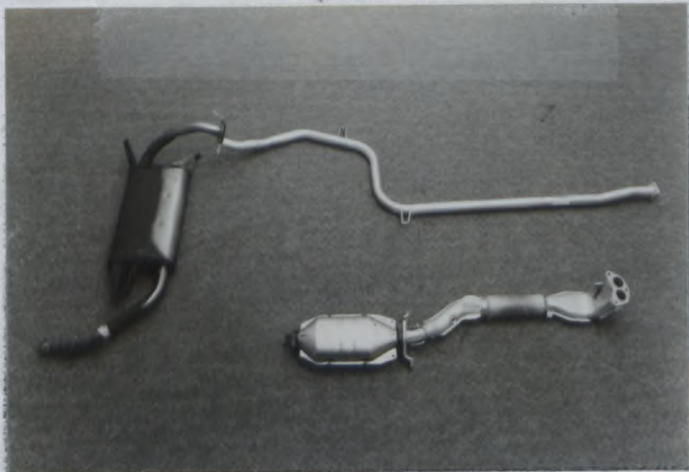


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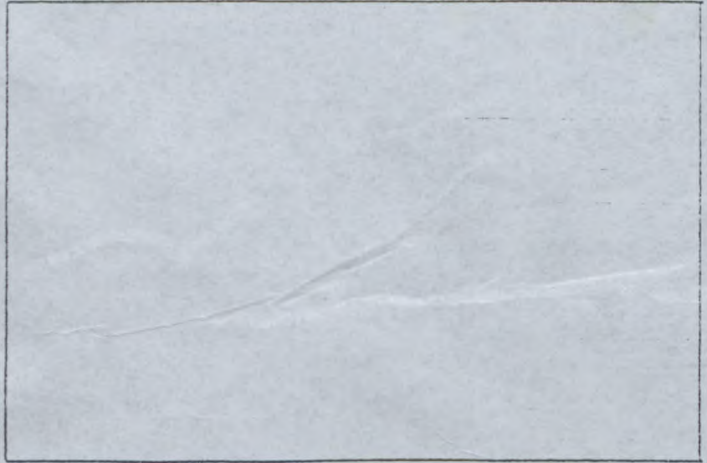


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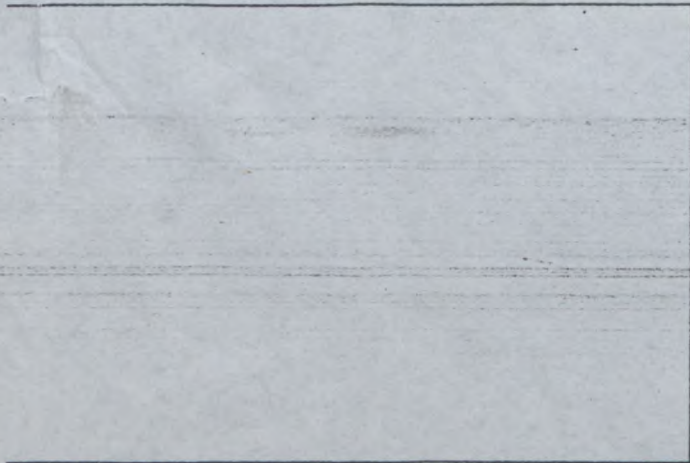


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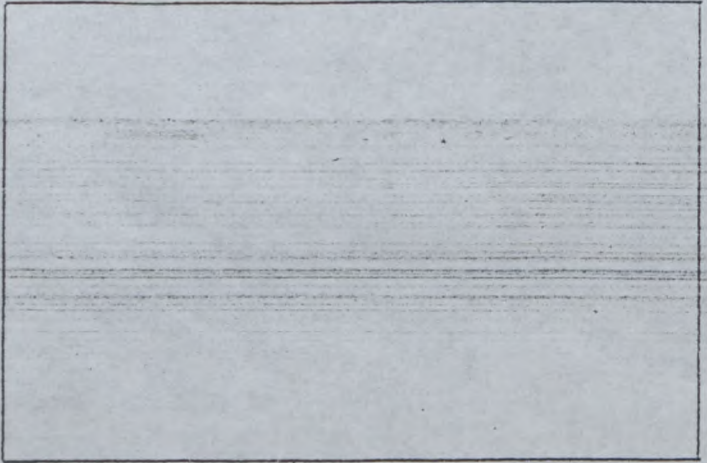


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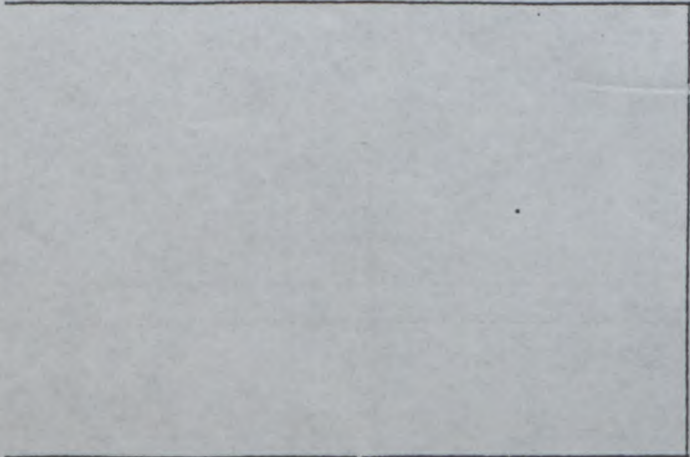
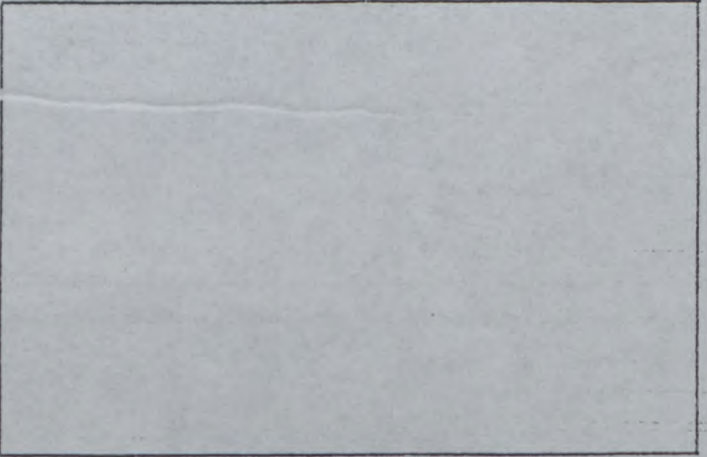


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FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

Homologation N°

N - 5547

Groupe **A/BIN**
Group

Extension N°

02/01VO

NON VALABLE EN SUPER PRODUCTION
NOT VALID IN SUPER PRODUCTION

FICHE D'EXTENSION D'HOMOLOGATION
FORM OF HOMOLOGATION EXTENSION

- ES** Evolution sportive du type / Sporting evolution of the type
- ET** Evolution normale du type / Normal evolution of the type
- VF** Variante de fourniture / Supply variant
- VO** Variante option / Option variant
- ER** Erratum / Erratum

Véhicule : Constructeur **PROTON**
Vehicle : Manufacturer

Modèle et type **SATRIA 1.6 GLI**
Model and type

Homologation valable à partir du **01 SEP. 2001**
Homologation valid as from

Page or ext.	Article	Description																								
		OPTIONAL CLOSE RATIO STRAIGHT CUT GEAR SET																								
	603																									
	e)	<table border="1"> <thead> <tr> <th>RATIO</th> <th>NUMBER OF TEETH</th> <th>RATIO</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>13 X 30</td> <td>2.308</td> </tr> <tr> <td>2</td> <td>16 X 27</td> <td>1.688</td> </tr> <tr> <td>3</td> <td>20 X 26</td> <td>1.300</td> </tr> <tr> <td>4</td> <td>22 X 24</td> <td>1.091</td> </tr> <tr> <td>5</td> <td>22 X 21</td> <td>0.955</td> </tr> <tr> <td>R</td> <td>12 X 26 X 37</td> <td>3.083</td> </tr> <tr> <td>CONSTANT</td> <td>16 x 26</td> <td>1.625</td> </tr> </tbody> </table>	RATIO	NUMBER OF TEETH	RATIO	1	13 X 30	2.308	2	16 X 27	1.688	3	20 X 26	1.300	4	22 X 24	1.091	5	22 X 21	0.955	R	12 X 26 X 37	3.083	CONSTANT	16 x 26	1.625
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CONSTANT	16 x 26	1.625																								
	603	LIMITED SLIP DIFFERENTIAL MECHANICAL PLATE TYPE PHOTO 92/93 PART NUMBER: PN704																								
	605																									
	b	RATIO 3.357 3.066																								
	c	TEETH 14/47 15/46																								
	803	FLUID DISTRIBUTION VALVE PHOTO 86																								

Marque
Make **PROTON**

Modèle
Model **SATRIA**

Homologation N°

N - 5547

Extension N°

02 / 01 V0

PHOTO N° 93

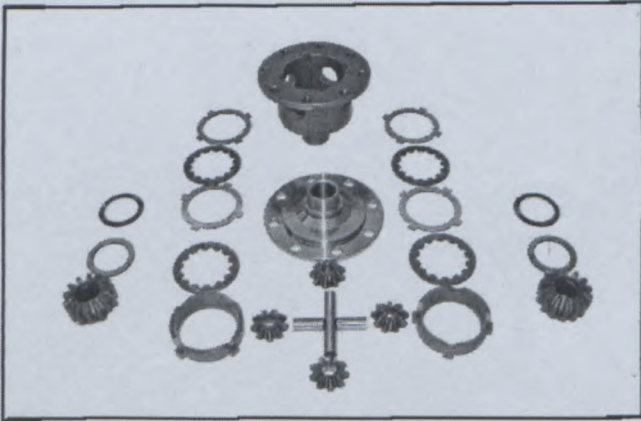


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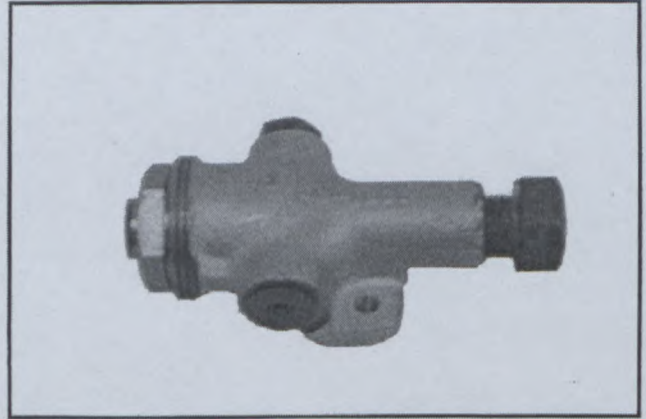


PHOTO N° 92



PHOTO N°



PHOTO N°

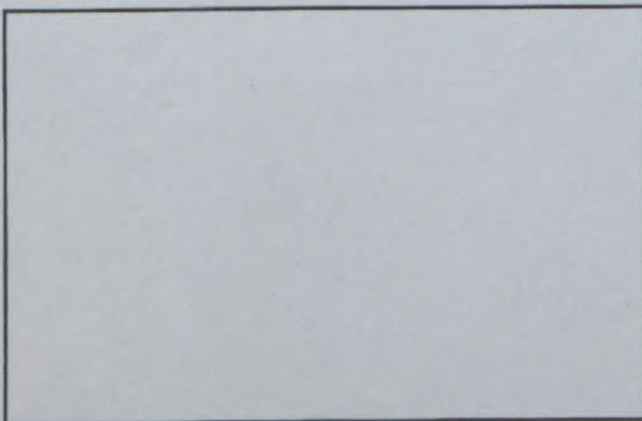


PHOTO N°

