



FEDERATION INTERNATIONALE DU SPORT AUTOMOBILE

Homologation N°

N - 5492

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

Homologation valable à partir du 01 JUL. 1993 prononcée par FISA
Homologation valid as from _____ decided by _____

En complément de la fiche de Gr. A n° 5492
In addition to the Gr. A from n° _____

IMPORTANT:

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

IMPORTANT:

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

1. DEFINITIONS

101. Constructeur HYUNDAI MOTOR COMPANY
Manufacturer _____

102. Dénomination(s) commerciale(s) — Modèle et type
Commercial name(s) — Type and model LANTRA(ELANTRA) 1.8 16V

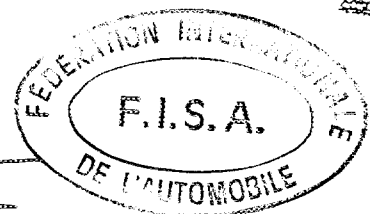
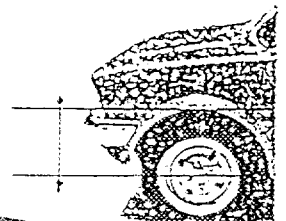
103. Cylindrée totale 1836 cm³
Cylinder capacity _____

2. DIMENSIONS, POIDS / DIMENSIONS, WEIGHTS

201. Poids minimum 1155 kg
Minimum weight _____

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

AV
Front 394.6 mm
AR
Rear 365.9 mm



Marque HYUNDAI Modele LANTRA (ELANTRA)
 Make HYUNDAI Model 1.8 16V N° Homol. N-5492

207. Voie maximum AV AR
 Maximum track Front 1446 mm Rear 1430 mm

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

3. MOTEUR / ENGINE

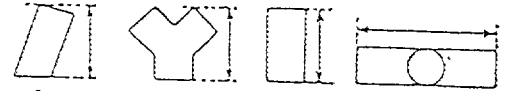
302. Nombre de supports 4
 Number of supports _____

308. Volume minimal total d'une chambre de combustion
 Total minimum volume of a combustion chamber 55.68 cm³

309. Volume minimum d'une chambre de combustion dans la culasse
 Minimum volume of a combustion chamber in the cylinderhead 44.3 cm³

310. Rapport volumétrique maximum (par rapport à l'unité)
 Maximum compression ratio (in relation with the unit) 9.2:1

311. Hauteur minimum du bloc-cylindrès 284 mm
 Minimum height of the cylinder block _____ mm



313. Chemises b) Matériau XXXX
 Sleeves Material _____

X

317. Piston a) Matériau ALUMINUM ALLOY
 Piston Material _____

b) Nombre de segments 3 c) Poids minimum 319 g
 Number of rings _____ Minimum weight _____

d) Distance de la médiane de l'axe au sommet du piston
 Distance from gudgeon pin center line to highest point of piston crown 35±0.1 mm

e) Distance (+/-) entre le sommet du piston au PMH et le plan de joint du bloc-cylindre
 Distance (+/-) between the top of the piston at TDC and the gasket plane of the cylinderblock 0.1 mm

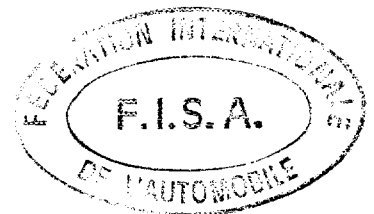
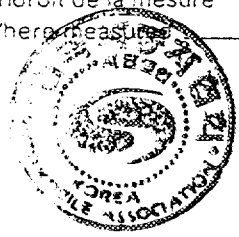
f) Volume de l'évidement du piston 4.1±0.3
 Piston groove volume _____ cm³

319. Vilebrequin i) Diamètre maximum des manetons
 Crankshaft Maximum diameter of big end journals ∅ 57 mm

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

321. Culasse: c) Hauteur minimum 131.9
 Cylinderhead: Minimum height _____ mm

d) Endroit de la mesure
 Where measured SEALING SURFACE CYLINDER BLOCK / HEAD TO SEALING SURFACE VALVE COVER.



Marque / Make: HYUNDAI

Modèle / Model: LANTRA (ELANTRA) 1.8 16V

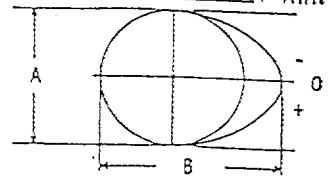
N° Homol.: N-5492

322. Epaisseur du joint de culasse serré / Thickness of the tightened cylinderhead gasket: 1.25±0.08 mm

325. Arbre à cames e) Diamètre des paliers / Camshaft Diameter of bearings: ∅ 26.0-0.030/-0.049 mm

g) Dimensions de la came / Cam dimensions

Admission: / Inlet:	A = <u>30.0</u> mm	
	B = <u>35.493 ±0.1</u> mm	
Echappement: / Exhaust:	A = <u>30.0</u> mm	
	B = <u>35.2±0.1</u> mm	



326. Distribution a) Jeu théorique pour la distribution / Theoretical timing clearance

Admission / Inlet:	<u>0</u> mm	Echappement / Exhaust:	<u>0</u> mm
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b) Avance à l'ouverture (avec jeu théorique (326 a)) / Valves open at (with theoretical timing clearance (326 a))

Admission / Inlet:	<u>26</u>	avant/après PMH / before/after TDC	Echappement / Exhaust:	<u>55</u>	avant/après PMB / before/after BDC
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c) Retard à la fermeture (avec jeu théorique (326 a)) / Valves closes at (with theoretical timing clearance (326 a))

Admission / Inlet:	<u>46</u>	avant/après PMB / before/after BDC	Echappement / Exhaust:	<u>9</u>	avant/après PMH / before/after TDC
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d) Levée de came en mm (arbre démonté) / Cam lifts in mm (dismounted camshaft) (dessin/drawing art. 325)

Admission / Inlet

0 = 5.2 mm

LEFT		RIGHT	
- 5° = <u>5.1</u> mm	+ 5° = <u>5.2</u> mm	- 5° = <u>5.2</u> mm	+ 5° = <u>5.2</u> mm
- 10° = <u>5.0</u> mm	+ 10° = <u>5.0</u> mm	- 10° = <u>5.0</u> mm	+ 10° = <u>5.0</u> mm
- 15° = <u>4.7</u> mm	+ 15° = <u>4.7</u> mm	- 15° = <u>4.7</u> mm	+ 15° = <u>4.7</u> mm
- 30° = <u>3.4</u> mm	+ 30° = <u>3.3</u> mm	- 30° = <u>3.3</u> mm	+ 30° = <u>3.3</u> mm
- 45° = <u>1.5</u> mm	+ 45° = <u>1.1</u> mm	- 45° = <u>1.1</u> mm	+ 45° = <u>1.1</u> mm
- 60° = <u>0.1</u> mm	+ 60° = <u>0.0</u> mm	- 60° = <u>0.0</u> mm	+ 60° = <u>0.0</u> mm
- 75° = <u>0.0</u> mm	+ 75° = <u>0.0</u> mm	- 75° = <u>0.0</u> mm	+ 75° = <u>0.0</u> mm
- 90° = <u>0.0</u> mm	+ 90° = <u>0.0</u> mm	- 90° = <u>0.0</u> mm	+ 90° = <u>0.0</u> mm
- 105° = <u>0.0</u> mm	+ 105° = <u>0.0</u> mm	- 105° = <u>0.0</u> mm	+ 105° = <u>0.0</u> mm
- 120° = <u>0.0</u> mm	+ 120° = <u>0.0</u> mm	- 120° = <u>0.0</u> mm	+ 120° = <u>0.0</u> mm
- 135° = <u>0.0</u> mm	+ 135° = <u>0.0</u> mm	- 135° = <u>0.0</u> mm	+ 135° = <u>0.0</u> mm
- 150° = <u>0.0</u> mm	+ 150° = <u>0.0</u> mm	- 150° = <u>0.0</u> mm	+ 150° = <u>0.0</u> mm

Echappement / Exhaust

0 = 5.5 mm

LEFT		RIGHT	
- 5° = <u>5.4</u> mm	+ 5° = <u>5.4</u> mm	- 5° = <u>5.4</u> mm	+ 5° = <u>5.4</u> mm
- 10° = <u>5.3</u> mm	+ 10° = <u>5.3</u> mm	- 10° = <u>5.3</u> mm	+ 10° = <u>5.3</u> mm
- 15° = <u>5.0</u> mm	+ 15° = <u>5.0</u> mm	- 15° = <u>5.0</u> mm	+ 15° = <u>5.0</u> mm
- 30° = <u>3.6</u> mm	+ 30° = <u>3.7</u> mm	- 30° = <u>3.7</u> mm	+ 30° = <u>3.7</u> mm
- 45° = <u>1.4</u> mm	+ 45° = <u>1.8</u> mm	- 45° = <u>1.8</u> mm	+ 45° = <u>1.8</u> mm
- 60° = <u>0.1</u> mm	+ 60° = <u>0.1</u> mm	- 60° = <u>0.1</u> mm	+ 60° = <u>0.1</u> mm
- 75° = <u>0.0</u> mm	+ 75° = <u>0.0</u> mm	- 75° = <u>0.0</u> mm	+ 75° = <u>0.0</u> mm
- 90° = <u>0.0</u> mm	+ 90° = <u>0.0</u> mm	- 90° = <u>0.0</u> mm	+ 90° = <u>0.0</u> mm
- 105° = <u>0.0</u> mm	+ 105° = <u>0.0</u> mm	- 105° = <u>0.0</u> mm	+ 105° = <u>0.0</u> mm
- 120° = <u>0.0</u> mm	+ 120° = <u>0.0</u> mm	- 120° = <u>0.0</u> mm	+ 120° = <u>0.0</u> mm
- 135° = <u>0.0</u> mm	+ 135° = <u>0.0</u> mm	- 135° = <u>0.0</u> mm	+ 135° = <u>0.0</u> mm
- 150° = <u>0.0</u> mm	+ 150° = <u>0.0</u> mm	- 150° = <u>0.0</u> mm	+ 150° = <u>0.0</u> mm



Marque
Make HYUNDAI

Modèle LANTRA (ELANTRA)
Model 1.8 16V

N° Homol. N - 5 4 9 2

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

Admission / Inlet

Echappement / Exhaust

Art. 326 b) =

avant/après PMH
before/after TDC = 0,0 mm

+ 20°	=	_____	mm
+ 40°	=	_____	mm
+ 60°	=	_____	mm
+ 80°	=	_____	mm
+ 100°	=	_____	mm
+ 120°	=	_____	mm
+ 140°	=	_____	mm
+ 160°	=	_____	mm
+ 180°	=	_____	mm
+ 200°	=	_____	mm
+ 220°	=	_____	mm
+ 240°	=	_____	mm
+ 260°	=	_____	mm
+ 280°	=	_____	mm
+ 300°	=	_____	mm
+ 320°	=	_____	mm
+ 340°	=	_____	mm
+ 360°	=	_____	mm

Art. 326 b) =

avant/après PMB
before/after BDC = 0,0 mm

+ 20°	=	_____	mm
+ 40°	=	_____	mm
+ 60°	=	_____	mm
+ 80°	=	_____	mm
+ 100°	=	_____	mm
+ 120°	=	_____	mm
+ 140°	=	_____	mm
+ 160°	=	_____	mm
+ 180°	=	_____	mm
+ 200°	=	_____	mm
+ 220°	=	_____	mm
+ 240°	=	_____	mm
+ 260°	=	_____	mm
+ 280°	=	_____	mm
+ 300°	=	_____	mm
+ 320°	=	_____	mm
+ 340°	=	_____	mm
+ 360°	=	_____	mm

327. Admission h) Nombre de ressorts par soupape
Inlet Number of springs per valve _____

i) Caractéristiques des ressorts: Sous une charge de _____ kg, la longueur max. du ressort est de _____ mm
Spring characteristics: Under a load of 30/76.5 kg, the max. length of the spring is 40/29.7 mm
Caractéristiques des ressorts: Sous une charge de _____ kg, la longueur max. du ressort est de _____ mm
Spring characteristics: Under a load of _____ kg, the max. length of the spring is _____ mm

k) Diamètre extérieur des ressorts _____ mm
Exterior diameter of the springs 28.2 mm
l) Nombre de spires des ressorts _____ mm
Number of spring coils 7.7 mm

m) Diamètre du fil des ressorts _____ mm
Diameter of spring wire 4.52x3.68 mm
n) Longueur libre maximum des ressorts _____ mm
Maximum free length of the springs 48.3 mm

328. Echappement

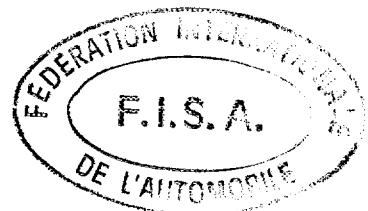
Exhaust

c) Diamètre de(s) sortie(s) du collecteur _____ mm
Diameter of the manifold exit(s) 42 mm
i) Nombre de ressorts par soupape _____
Number of springs per valve 1

k) Caractéristiques des ressorts: Sous une charge de _____ kg, la longueur max. du ressort est de _____ mm
Spring characteristics: Under a load of 30/76.5 kg, the max. length of the spring is 40/29.7 mm

l) Diamètre extérieur des ressorts _____ mm
Exterior diameter of the springs 28.2 mm
m) Nombre de spires des ressorts _____
Number of spring coils 7.7

n) Diamètre du fil des ressorts _____ mm
Diameter of spring wire 4.52x3.68 mm
o) Longueur libre maximum des ressorts _____ mm
Maximum free length of the springs 48.3 mm



Marque HYUNDAI Modèle LANIRA (ELANTRA)
 Make HYUNDAI Model I-8 16V N° Homol. N-5492 N

329. Système anti-pollution a) oui/non
 Anti pollution system Yes/~~no~~
 b) Description
 Description 3 WAY CATALYST + EXHAUST GAS RECIRCULATION+OTHER+(CANISTER)

330. Système d'allumage d) Nombre de bobines
 Ignition system Number of coils 2

331. Capacité du circuit de refroidissement
 Cooling system capacity 6 L

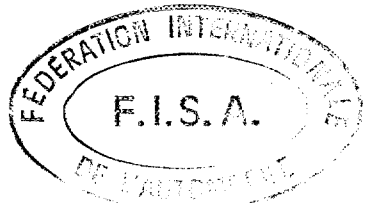
332. Ventilateur de refroidissement a) Nombre
 Cooling fan Number 1 b) Diamètre de l'hélice
 Diameter of the screw 308 mm
 c) Matériau de l'hélice
 Material of the screw PLASTIC d) Nombre de pales
 Number of blades 8
 e) Type de connection
 Type of connection ELECTRICS f) Ventilateur débrayable oui/non
 Automatic cut in yes/~~no~~

333. Système de lubrification c) Capacité totale
 Lubrification system Total capacity 4.4 L
 d) Radiateur(s) d'huile oui/non
 Oil radiator(s) ~~yes~~/no Nombre
 Number XXXX
 e) Emplacement du/des radiateurs
 Position of the radiator(s) FRONT SIDE OF ENGINE

4. CIRCUIT DE CARBURANT / FUEL CIRCUIT

401. Réservoir e) Emplacement des orifices
 Fuel tank Filler holes location RIGHT-HAND REAR QUARTER PANEL

402. Pompe(s) à essence a) Electrique Mécanique
 Fuel pump(s) Electrical Mecanical
 b) Nombre
 Number 1 c) Marque et type
 Make and type NIPPON DENSO/BOSCH
 d) Emplacement
 Location IN THE FUEL TANK e) Débit maximum
 Maximum flow 1.3 l/mn



Marque Make HYUNDAI

Modèle Model LANTRA (ELANTRA)
1.8 16V

N° Homol. N - 5492

5. EQUIPEMENT ELECTRIQUE / ELECTRICAL EQUIPEMENT

501. Batterie(s) Battery(les) b) Tension Tension 12 V c) Emplacement Location ENGINE COMPARTMENT

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

503. Phares escamotables: Retractable headlights: a) oui/non yes/no b) Système de commande Drive system XXXX

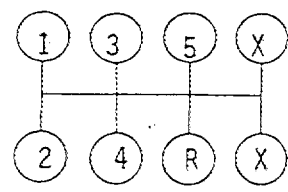
6. TRANSMISSION / DRIVE

602. Embrayage Clutch a) Type Type DRY SINGLE PLATE d) Diamètre du(des) disque(s) Diameter of the plate(s) 184x127 mm

603. Boîte de vitesse Gearbox e) rapports ratios

	Manuelle / Manual			Automatique / Automatic		
	rapports ratio	nombre de dents/ number of teeth	synchro.	rapports ratio	nombre de dents/ number of teeth	synchro.
1	3.083	37/12	X			
2	1.947	37/19	X			
3	1.285	36/28	X			
4	0.939	31/33	X			
5	0.756	28/37	X			
AR/R	3.083	37/26 x26/12				
Cons-tante Cons-tant.	4.592	34/31 x67/16				

l) Grille de vitesse Gear change gate



605. Couple Final driv 4.592

c) Nombre de dents Number of teeth 34/31x67/16



Marque / Make: HYUNDAI

Modèle / Model: LANTRA (ELANTRA) 1.8 16V

N° Homol. N-5492 N

7. SUSPENSION / SUSPENSION

702. Ressorts hélicoïdaux

Helical springs

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

AV / Front	AR / Rear
STEEL	STEEL
cui/non / yes/no	cui/non / yes/no
_____ mm	_____ mm
_____ mm	_____ mm
XXXX mm	XXXX mm
XXXX mm	XXXX mm

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

703. Ressorts à lames / Leaf springs

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

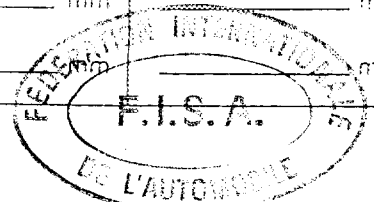
A = major leaf / X = auxiliary leaf
 2 = 2nd leaf / 3 = 3rd leaf / 4 = 4th leaf / 5 = 5th leaf

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

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

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

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



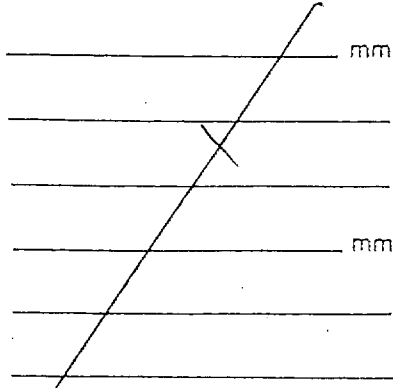
Marque
Make HYUNDAI

Modèle
Model LANTRA (ELANTRA)
1.8 16V

N° Homol. N-5492

704. Barre de torsion
Torsion bar

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

AV / Front	AR / Rear
 mm	<u>1340</u> mm
mm	mm
mm	<u>24</u> mm
mm	mm
mm	mm
mm	mm

706. Stabilisateur
Stabilizer

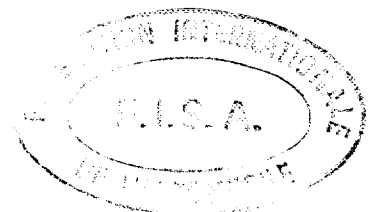
- a) Longueur efficace
Effective length
- b) Diamètre efficace
Effective diameter
- c) Matériau
Material

AV / Front	AR / Rear
<u>1000</u> <u>(CENTER TO CENTER)</u> mm	<u>1355±1%</u> mm
<u>20</u> mm	<u>23</u> mm
<u>STEEL</u>	<u>STEEL</u>

707. Amortisseurs
Shock absorbers

- d) Diamètre extérieur
Exterior diameter
- e) Assiette du ressort réglable
Adjustable spring trim
- f) Distance assiette-fixation
Distance trim-monitoring
- g) Diamètre de la tige de piston
Diameter of the piston rod

mm	mm
<u>oui/non</u> <u>yes/no</u>	<u>oui/non</u> <u>yes/no</u>
mm	mm
mm	mm



Marcue
Make HYUNDAI

Modèle
Model LANTRA (ELANTRA)
1.8 16V

N° Homol. N-5492 N

8. TRAIN ROULANT / RUNNING GEAR

	AV / Front	AR / Rear	Secours / Spare
a) Diamètre Diameter	<u>14</u> "	<u>14</u> "	<u>14</u> "
b) Largeur Width	<u>355.6</u> mm	<u>355.6</u> mm	<u>355.6</u> mm
c) Marque et type Make and type			
d) Matériau Material			
e) Poids unitaire Unitary weight			
f) Dépot entre plan de montage et extrémité intérieure Offset between mounting and extreme inner face			
	_____ mm	_____ mm	_____ mm

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

9. CARROSSERIE / BODYWORK

901. Intérieur
Interior

c) Climatisation
Air conditioning oui/non
yes/no

	AR / Rear	AV / Front
d) Sièges Seats		
d1) Type Type	<u>BENCH, SPLIT</u>	<u>BUCKET</u>
d2) Appui-tête Headrest	<u>oui/non</u> <u>yes/no</u>	<u>oui/non</u> <u>yes/no</u>
d3) Poids Weight	<u>20.25±1.0</u> kg	<u>14.22±1.0</u> kg

d4) Siège AR rabattable
Car rear seat be folded oui/non
yes/no

e) Plaque arrière
Rear ledge oui/non
yes/no

e1) Matériau
Material CLOTH

902. Extérieur
Exterior

n) Essuie-glace AR
Rear wiper oui/non
yes/no



Marque HYUNDAI
Make

Modèle LANTRA (ELANTRA)
Model 1.8-16V

N° Homol. N-5492 N

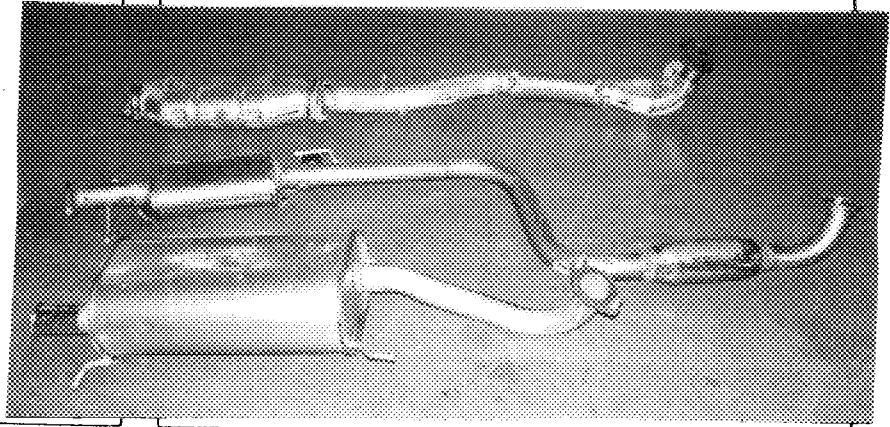
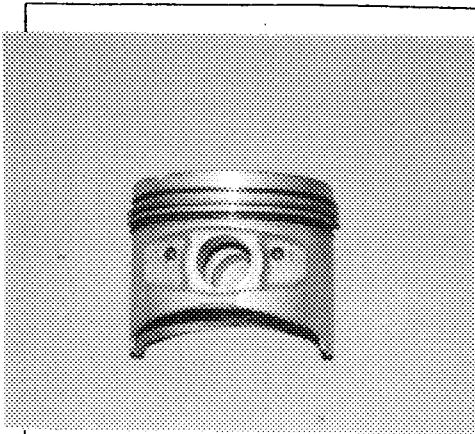
PHOTOS / PHOTOS

Moteur / Engine

AA) Piston de profil
Piston profile

BB) Echappement complet
Complete exhaust system

Ø 48,6 mm

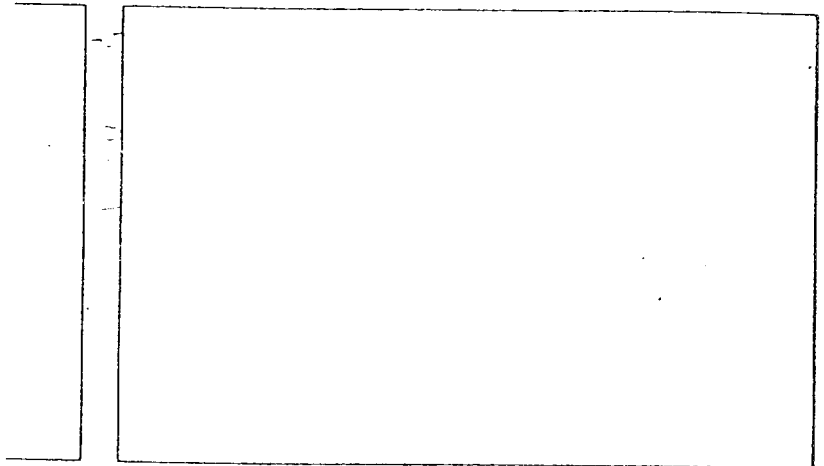
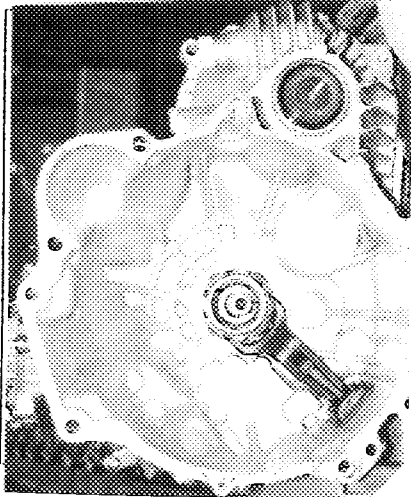


Transmission / Transmission

CC) Embrayage complet
Complete clutch

Train roulant / Running gear

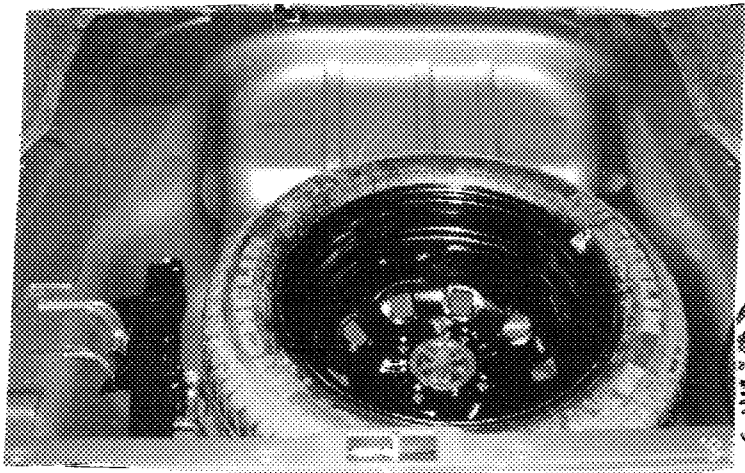
DD) Roue nue (vue de 3/4)
Bare wheel (3/4 view)



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

Carrosserie / Bodywork

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



Marque
Make

HYUNDAI

Modèle
Model

LANTRA (ELANTRA)
1.8 16V

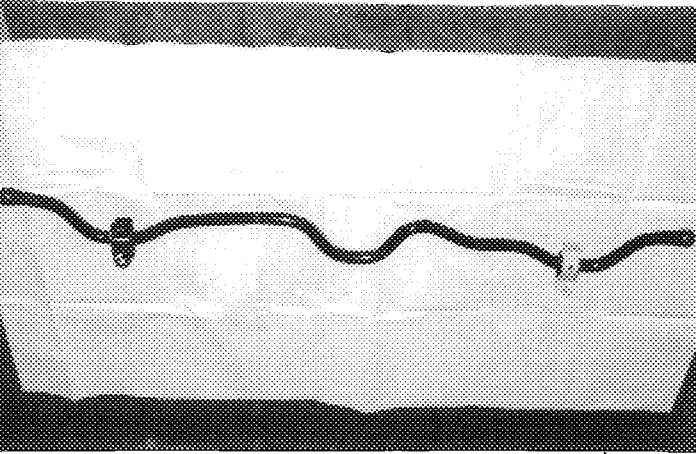
N° Homol.

N-5492

Suspension / Suspension

XV Système de suspension, selon l'article 705 ou en remplacement des photos O et P.
Suspension system according to article 705 or replacing photos O and P.

Front Stabilizer



Rear Stabilizer

