



FEDERATION INTERNATIONALE DU SPORT AUTOMOBILE

Homologation N°

T-1003

Groupe Tout-Terrain
Group in group

FT-012

FICHE D'HOMOLOGATION CONFORME A L'ANNEXE J DU CODE SPORTIF INTERNATIONAL
HOMOLOGATION FORM IN ACCORDANCE WITH APPENDIX J OF THE INTERNATIONAL SPORTING CODE

Homologation valable à partir du
Homologation valid as from

01 JAN. 1989

en groupe Tout-Terrain
in group

Photo A



Photo B



1. DEFINITIONS / DEFINITIONS

101. Constructeur
Manufacturer MITSUBISHI MOTORS CORP.
102. Dénomination(s) commerciale(s) — Modèle et type
Commercial name(s) — Type and model PAJERO WAGON TURBO (L049G)
103. Cylindrée totale
Cylinder capacity (2,476.8 x 1.7) 4,210.6 cm³
104. Mode de construction
Type of car construction
 séparée, matériau du châssis Steel
 separate, material of chassis
 monocoque
 unitary construction
105. Nombre de volumes
Number of volumes 2
106. Nombre de places
Number of places 4



2. DIMENSIONS, POIDS / DIMENSIONS, WEIGHT

201. Poids minimum
Minimum weight 1,580 kg
202. Longueur hors-tout
Overall length 4,600 mm ± 1%
203. Largeur hors-tout
Overall width 1,695 mm ± 1% Endroit de la mesure
Where measured At rear axle
204. Largeur de la carrosserie:
Width of bodywork:
a) A la hauteur de l'axe AV
At front axle 1,690 mm ± 1%
b) A la hauteur de l'axe AR
At rear axle 1,695 mm ± 1%
206. Empattement: a) Droit
Wheelbase: Right 2,695 mm ± 1% b) Gauche:
Left: 2,695 mm ± 1%
207. Voie maximum AV
Maximum track Front 1,400 mm AR
Rear 1,375 mm
209. Porte-à-faux: a) AV:
Overhang: Front: 745 mm ± 1% b) AR:
Rear: 1,160 mm ± 1%
210. Distance «G» (volant — paroi de séparation AR)
Distance «G» (steering wheel — rear bulkhead) 1,535 mm ± 1%

3. MOTEUR / ENGINE: (En cas de moteur rotatif, voir Article 335 sur fiche complémentaire).
(In case of rotative engine, see Article 335 on complementary form).

Inclination (F/R) : 5°50'

301. Emplacement et position du moteur:
Location and position of the engine: Front Longitudinal Vertical angle : 0°

302. Nombre de supports
Number of supports 3

303. Cycle Diesel (4)
Cycle



Marque MITSUBISHI Modèle PAJERO (L049G) N° Homol. _____
 Make MITSUBISHI Model PAJERO (L049G)

304. Suralimentation oui/non; type Exhaust Turbocharger
 Supercharging yes/~~no~~; type _____
 (En cas de suralimentation, voir également l'Article 334 sur fiche complémentaire)
 (In case of supercharging, see also Article 334 on complementary form).

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

306. Mode de refroidissement Liquid
 Cooling system _____

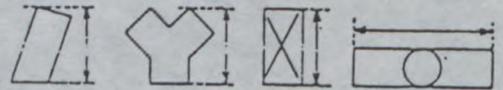
307. Cylindrée: a) Unitaire (619.2 x 1.7) b) Totale
 Cylinder capacity: a) Unitary 1052.6 cm³ b) Total (2476.8 x 1.7) 4210.6 cm³

308. Volume minimal total d'une chambre de combustion 29.0 cm³
 Total minimum volume of a combustion chamber _____

309. Volume minimum d'une chambre de combustion dans la culasse 19.2 cm³
 Minimum volume of a combustion chamber in the cylinderhead _____

310. Rapport volumétrique maximum (par rapport à l'unité) 22.4 : 1
 Maximum compression ratio (in relation with the unit) _____

311. Hauteur minimum du bloc-cylindres 319 mm
 Minimum height of the cylinder block _____



312. Matériau du bloc-cylindres Cast - iron
 Cylinder block material _____

313. Chemises: a) oui/non b) Matériau Cast - iron c) Type: Dry
 Sleeves: yes/~~no~~ Material _____ Type: _____

314. Alésage 91.1 mm
 Bore _____

316. Course 95.0 mm
 Stroke _____

317. Piston a) Matériau Al - Alloy
 Piston Material _____
 b) Nombre de segments 3 c) Poids minimum 675 g
 Number of rings _____ Minimum weight _____
 d) Distance de la médiane de l'axe au sommet du piston 48.7 ± 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 0.7 ± 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 11.0 ± 0.5 cm³
 Piston groove volume _____



Marque MITSUBISHI Modèle PAJERO (L049G) N° Homol. T-1003
Make _____ Model _____

318. Bielle: a) Matériau Steel b) Type de la tête de bielle Separate
Connecting rod: Material _____ Big end type _____
c) Diamètre intérieur de la tête de bielle (sans coussinets):
Interior diameter of the big end (without bearings): 56.0 mm $\pm 0.1\%$
d) Longueur entre axes: 158 mm (± 0.1 mm) e) Poids minimum: 1,025 g
Length between the axes: _____ Minimum weight: _____

319. Vilbrequin: a) Type de construction Integral
Crankshaft: Type of manufacture _____
b) Matériau Steel
Material _____
c) coulé estampé
 moulded stamped d) Nombre de paliers 5
Number of bearings _____
e) Type de paliers Plain
Type of bearings _____
f) Diamètre des paliers 66 mm $\pm 0.2\%$
Diameter of bearings _____
g) Matériau des chapeaux des paliers Cast - iron
Bearing caps material _____
h) Poids minimum du vilbrequin nu 17,400 g
Minimum weight of the bare crankshaft _____
i) Diamètre maximum des manetons 53 mm
Maximum diameter of big end journals _____

320. Voiant moteur: a) Matériau Cast - iron
Flywheel: Material _____
b) Poids minimum avec couronne de démarreur 19,800 g
Minimum weight of the flywheel with starter ring _____

321. Culasse: a) Nombre de culasses 1 b) Matériau Aluminum Alloy
Cylinderhead: Number of cylinderheads _____ Material _____
c) Hauteur minimum 93.9 mm
Minimum height _____
d) Endroit de la mesure Sealing surface cylinder block and head - Sealing surface valve cover
Where measured _____

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

323. Alimentation par carburateur(s): a) Nombre de carburateurs XXXX
Fuel feed by carburettor(s): Number of carburators _____
b) Type XXXX c) Marque et modèle XXXX
Type _____ Make and model _____



- d) Nombre de passages de gaz par carburateur / Number of mixture passages per carburettor: XXXX
- e) Diamètre maximum de la tubulure de gaz à la sortie du carburateur / Maximum diameter of the flange hole of the carburettor exit port: XXXX mm
- f) Diamètre du diffuseur au point d'étranglement maximum / Diameter of the venturi at the narrowest point: XXXX mm

324. Alimentation par injection:

- Fuel feed by injection: a) Marque: DIESEL KIKI
 Manufacturer: _____
- b) Modèle du système d'injection: Diesel Fuel Injection (VE Type pump)
 Model of injection system: _____
- c) Mode de dosage du carburant: mécanique / électronique / hydraulique
 Kind of fuel measurement: mechanical / electronical / hydraulic
- c1) Plongeur / Piston pump: oui/non / yes/~~no~~
- c2) Mesure du volume d'air / Measurement of air volume: oui/non / ~~yes~~/no
- c3) Mesure de la masse d'air / Measurement of air mass: oui/non / ~~yes~~/no
- c4) Mesure de la vitesse de l'air / Measurement of air speed: oui/non / ~~yes~~/no
- c5) Mesure de la pression d'air / Measurement of air pressure: oui/non / ~~yes~~/no
- Quelle est la pression de réglage? / Which pressure is taken for measurement? XXXX bars
- d) Dimensions effectives du point de mesure au(x) papillon(s) ou au(x) tiroir(s) d'étranglement / Effective dimensions of measure position in the throttle area: XXXX mm
- e) Nombre des sorties effectives de carburant / Number of effective fuel outlets: 4
- f) Position des soupapes d'injection: Canal d'admission / Culasse
 Position of injection valves: Inlet manifold / Cylinderhead
- g) Parties du système d'injection servant au dosage du carburant / Statement of fuel measuring parts of injection system: _____

Injection pump with boost compensator (Mechanical governor built-in type)

325. Arbre à cames: a) Nombre / Camshaft: Number 1
- b) Emplacement / Location: TOP(OHC)
- c) Système d'entraînement / Driving system: Notched belt
- d) Nombre de paliers par arbre / Number of bearings for each shaft: 5
- e) Diamètre des paliers / Diameter of bearings: 30.0 mm
- f) Système de commande des soupapes / Type of valve operation: Rocker



327. Admission: a) Matériau du collecteur

Inlet: Material of the manifold Aluminum Alloy

b) Nombre d'éléments du collecteur

Number of manifold elements 1

c) Nombre de soupapes par cylindre

Number of valves per cylinder 1

d) Diamètre maximum des soupapes

Maximum diameter of the valves 40 ± 0.1 mm

e) Diamètre de la tige de soupape

Diameter of the valve stem 8 + 0 - 0.2 mm

f) Longueur de la soupape

Length of the valve 136.5 ± 1.5 mm

g) Type des ressorts de soupape

Type of valve springs Helical

h) Nombre de ressorts par soupape

Number of springs per valve 1

328. Echappement: a) Matériau du collecteur

Exhaust: Material of the manifold Cast - iron

b) Nombre d'éléments du collecteur

Number of manifold elements 1

c) Diamètre de(s) sortie(s) du collecteur

Diameter of the manifold exit(s) 48 mm

e) Diamètre maximum des soupapes

Maximum diameter of the valves 34 ± 0.1 mm

d) Nombre de soupapes par cylindre

Number of valves per cylinder 1

f) Diamètre de la tige de soupape

Diameter of the valve stem 8 + 0 - 0.2 mm

g) Longueur de la soupape

Length of the valve 136.5 ± 1.5 mm

h) Type des ressorts de soupape

Type of valve springs 1

i) Nombre de ressorts par soupape

Number of springs per valve 1

329. Système anti-pollution a) oui/non

Anti pollution system Yes/no

b) Description

Description XXXX

330. Système d'allumage: a) Type

Ignition system: Type XXXX

b) Nombre de bougies par cylindre

Number of plugs per cylinder XXXX

c) Nombre de distributeurs

Number of distributors XXXX

d) Nombre de bobines

Number of coils XXXX

332. Ventilateur de refroidissement a) Nombre

Cooling fan Number 1

c) Matériau de l'hélice

Material of the screw plastics

b) Diamètre de l'hélice

Diameter of the screw 430 mm

d) Nombre de pales

Number of blades 8

e) Type de connexion

Type of connection Thermo type

f) Ventilateur débrayable oui/non

Automatic cut in yes/no



333. Système de lubrification: a) Type Lubrification system: Type Wet sump b) Nombre de pompes à huile Number of oil pumps 1

c) Capacité totale Total capacity 6.7 L

d) Radiateur(s) d'huile Oil radiator(s) oui/non yes/no yes/no Nombre Number 1

e) Emplacement du/des radiateurs Position of the radiator(s) *1 Attached to the head lamp support in the engine compartment.

5. EQUIPEMENT ELECTRIQUE / ELECTRICAL EQUIPEMENT

501. Batterie(s): a) Nombre Battery(ies): Number 1

b) Tension Tension 12 V c) Emplacement Location In the engine compartment

502. Génératrice(s) Generator(s) a) Nombre Number 1
b) Type Type Altanator c) Système d'entraînement Drive system V- belt

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

6. TRANSMISSION / DRIVE

601. Roues motrices: Driving wheels: avant front arrière rear

602. Embrayage Clutch a) Type Type Dry single
b) Système de commande Drive system Hydraulic

c) Nombre de disques Number of plates 1 d) Diamètre du(des) disque(s) Diameter of the plate(s) 225 mm

603. Boîte de vitesses: a) Emplacement Gear-box: Location Attached to engine in the engine compartment

b) Marque «manuelle» «Manual» make MITSUBISHI c) Marque «automatique» «Automatic» make XXXX

Emplacement de la commande Location of the gear lever Floor



Marque MITSUBISHI
 Make _____

Modèle PAJERO (L049G)
 Model _____

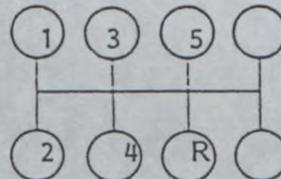
N° Homol. T - 1003

603. Boîte de vitesse

Gearbox
 e) rapports ratios

	Manuelle / Manual			Automatique / Automatic		
	rappports ratio	nombre de dents / number of teeth	synchro.	rappports ratio	nombre de dents / number of teeth	synchro.
1	3.97	35/13	x			
2	2.14	29/20	x			
3	1.36	24/26	x			
4	1.00	-	x			
5	0.86	18/31	x			
AR/R	3.58	$\frac{17}{14} \times \frac{34}{17}$				
Const- tante Const- tant.	1.47	28/19				

f) Grille de vitesse
 Gear change gate



604. Surmultiplication: a) Type XXXX
 Overdrive: Type _____

b) Rapport XXXX c) Nombre de dents XXXX
 Ratio _____ Number of teeth _____

d) Utilisable avec les vitesses suivantes
 Usuable with the following gears _____

605. Couple final:

Final drive:
 a) Type du couple final
 Type of final drive
 b) Rapport
 Ratio
 c) Nombre de dents
 Teeth number
 d) Type de limitation de
 différentiel (si prévu)
 Type of differential
 limitation (if provided)

AV / Front	AR / Rear
<u>Hypoid & Bevel gear</u>	<u>Hypoid & Bevel gear</u>
<u>4.875</u>	<u>4.875</u>
<u>39/8</u>	<u>39/8</u>
<u>XXXX</u>	<u>Limited Slip</u>



Marque / Make MITSUBISHI Modèle / Model PAJERO (L049G) N° Homol. T-1003

e) Rapport de la boîte de transfert / Ratio of the transfer box 1 : 1.925

606. Type de l'arbre de transmission / Type of the transmission shaft Propeller shaft with two universal joint (sliding, needle roller)

7 SUSPENSION / SUSPENSION

701. Type de suspension: a) AV / Front Independent -wishbone with torsion bar spring
 Type of suspension: b) AR / rear Rigid axle with leaf spring

702. Ressorts hélicoïdaux: AV: oui/non AR: oui/non
 Hélicoïdal springs: Front: ~~yes~~/no Rear: ~~yes~~/no

	AV Front	AR / Rear
a) Matériau / Material	XXXX	XXXX

703. Ressorts à lames: AV: oui/non AR: oui/non
 Leaf springs: Front: ~~yes~~/no Rear: yes/~~no~~

703. Ressorts à lames / Leaf springs
 A = *Lame maitresse / X = lame auxiliaire* A = *major leaf / X = auxiliary leaf*
 2 = *2è lame / 3 = 3è lame / 4 = 4è lame / 5 = 5è lame* 2 = *2nd leaf / 3 = 3rd leaf / 4 = 4th leaf / 5 = 5th leaf*

	A	2	3
a) Matériau / Material	Steel	Steel	Steel

	4	5	X
a) Matériau / Material	Steel	Steel	Steel



803. Freins: a) Système de freinage Hydraulic
 Brakes: Braking system _____
 b) Nombre de maître-cylindres Tandem b1) Alésage 23.8 - 23.8
 Number of master cylinders _____ Bore _____ mm
 c) Servo-frein oui/non c1) Marque et type JIDOSHAKIKI, VACUM
 Power assisted brakes yes/no Make and type _____
 d) Régulateur de freinage oui/non d1) Emplacement _____
 Braking adjuster yes/no Location On the frame above rear
 suspension

e) Nombre de cylindres par roue:
 Number of cylinders per wheel:

e1) Alésage
 Bore

f) Freins à tambours:
 Drum brakes:

(1) Diamètre intérieur
 Interior diameter
 (2) Nombre de mâchoires par roue.
 Number of shoes per wheel
 (3) Surface de freinage
 Braking surface
 (4) Largeur des garnitures
 Width of the shoes

g) Freins à disques:
 Disc brakes:

g1) Nombres de sabots par roue
 Number of pads per wheel
 g2) Nombre d'étriers par roue
 Number of calipers per wheel
 g3) Matériau des étriers
 Caliper material
 g4) Epaisseur maximale du disque
 Maximum disc thickness
 g5) Diamètre extérieur du disque
 Exterior diameter of the disc
 g6) Diamètre extérieur de frottement des sabots
 Exterior diameter of the shoe's rubbing surface
 g7) Diamètre intérieur de frottement des sabots
 Interior diameter of the shoe's rubbing surface
 g8) Longueur hors-tout des sabots
 Overall length of the shoes
 g9) Disques ventilés
 Ventilated disc
 g10) Surface de freinage par roue
 Braking surface per wheel

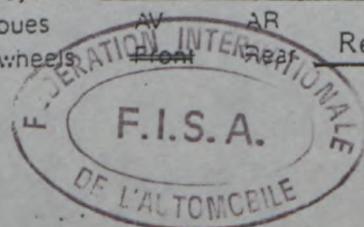
Avant / Front	Arrière / Rear
1	1
57.2 mm	22.2 mm
XXXX mm (± 1.5 mm)	254 mm (± 1.5 mm)
XXXX	2
XXXX cm ²	_____ cm ²
XXXX mm	50±1 mm
2	_____
1	_____
Cast - iron	_____
22 ± 1 mm	_____ mm
277±1.5 mm (± 1 mm)	_____ mm (± 1 mm)
275±1.5 mm	_____ mm
176±1.5 mm	_____ mm
105±1.5 mm	_____ mm
oui/non yes/no	oui/non yes/no
_____ cm	_____ cm ²

h) Frein de stationnement:
 Parking brake:

h2) Emplacement de la commande
 Location of the lever Between front seat

h1) Systeme de commande
 Command system Cable

h3) Effet sur roues
 On which wheels AV Front AR Rear



304. Direction: a) Type Recirculating ball and nut
 Steering: Type _____
 b) Rapport / Ratio: 1 : 16.4 c) Servo-assistance / Power assisted: oui/non / ~~yes/no~~

9. CARROSSERIE / BODYWORK

901. Intérieur: a) Ventilation oui/non b) Chauffage oui/non
 Interior: Ventilation ~~yes/no~~ Heating ~~yes/no~~
 c) Climatisation oui/non
 Air conditioning ~~yes/no~~

	AR / Rear	AV / Front
d) Sièges / Seats		
d1) Type / Type	<u>Bench</u>	<u>Separate</u>
d2) Appui-tête / Headrest	oui/non / yes/no	oui/non / yes/no
d3) Poids / Weight	<u>31.5</u> kg	<u>44.5</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: XXXX
 f) Toit ouvrant optionnel / Sun roof optional: oui/non / ~~yes/no~~ f1) Type: XXXX
 f2) Système de commande / Command system: XXXX
 g) Système d'ouverture des vitres latérales: AV/Front: Manual
 Opening system for the side windows: AR/Rear: Manual

902. Extérieur: a) Nombre de portes / Number of doors: 4 b) Hayon AR / Rear tailgate: oui/non / ~~yes/no~~ Steel
 c) Matériau des portières: / Door material: AV/Front: _____ AR/Rear: Steel
 d) Matériau du capot AV / Front bonnet material: Steel
 e) Matériau du capot/hayon AR / Rear bonnet / tailgate material: Steel
 f) Matériau de la carrosserie / Bodywork material: Steel



Marque
Make MITSUBISHI

Modèle
Model PAJERO (L049G)

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- k) Matériau des vitres latérales avant _____ Safety glass
Front side window material
- l) Matériau du pare-choc avant _____ Steel
Material of the front bumper
- m) Matériau du pare-choc arrière _____ Steel
Material of the rear bumper
- n) Essuie-glace AR oui/non
Rear wiper ~~yes~~/no

INFORMATIONS COMPLEMENTAIRES

COMPLEMENTARY INFORMATION

Art 321 e) Angle between the axis of the inlet valve and the exhaust valve: 0°

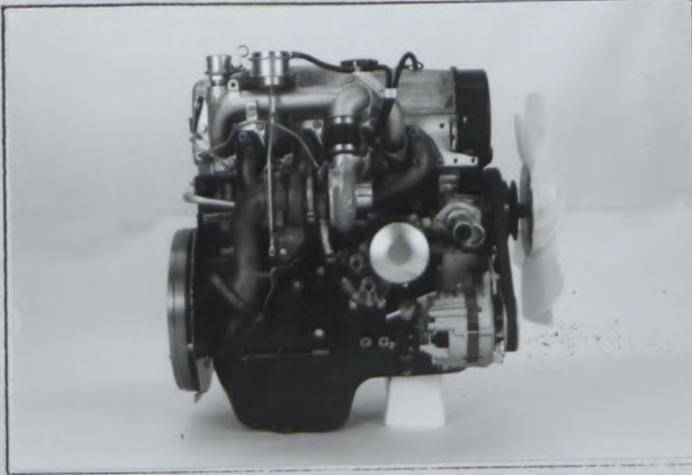
Art 605 b) Ratio : 4.222 , 4.625
C) Teeth number : 38/9 , 37/8
E) Ratio of the transfer box : 1 : 1.944



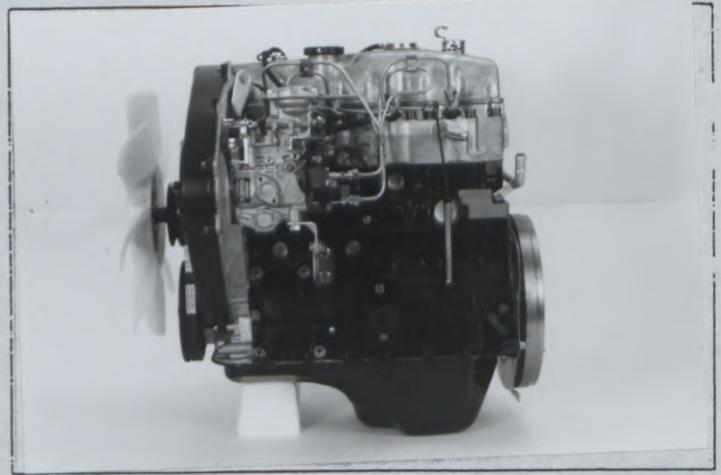
PHOTOS / PHOTOS

Moteur / Engine

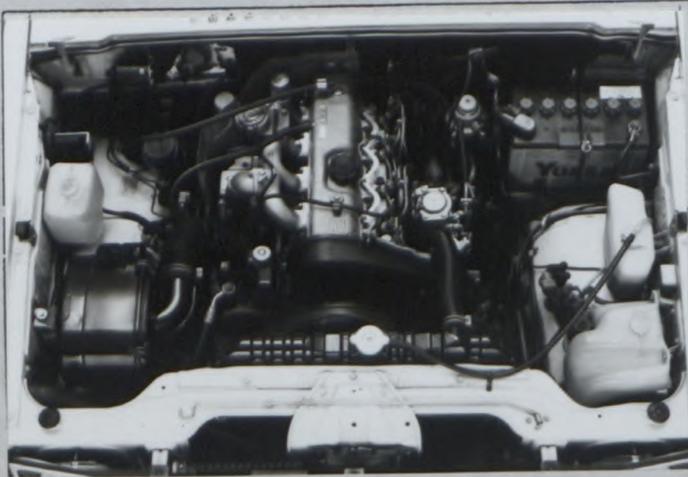
C) Profil droit du moteur déposé
Right hand view of dismantled engine



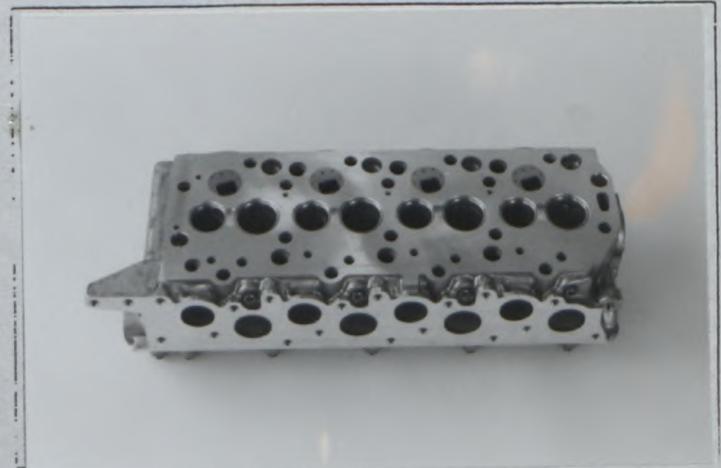
D) Profil gauche du moteur déposé
Left hand view of dismantled engine



E) Moteur dans son compartiment
Engine in its compartment



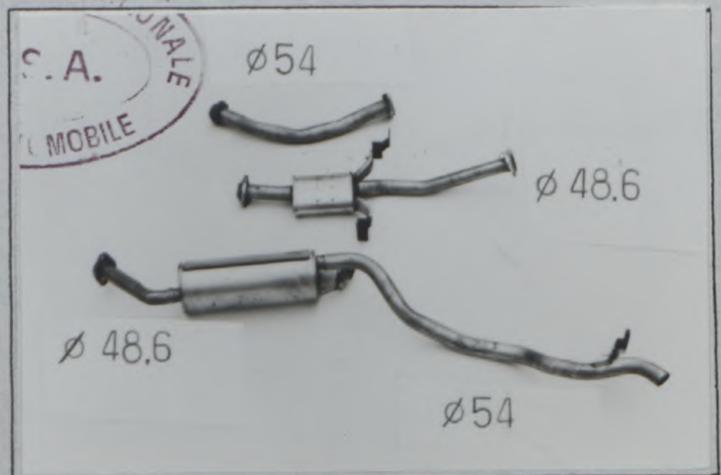
F) Culasse nue
Bare cylinderhead



AA) Piston de profil
Piston profile



BB) Echappement complet
Complete exhaust system

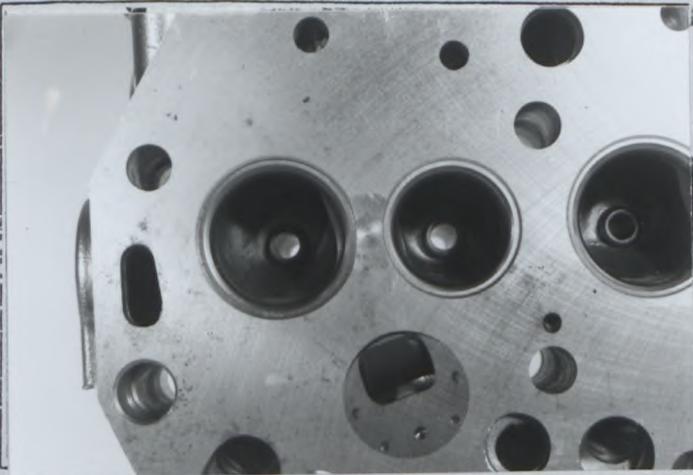


Marque MITSUBISHI
Make

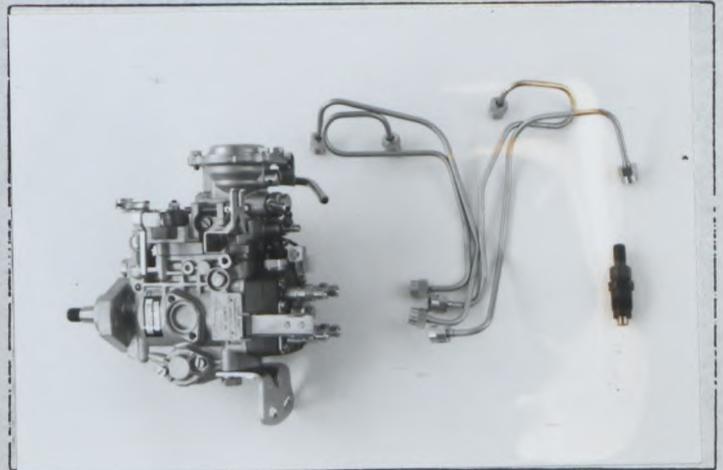
Modèle PAJERO (L049G)
Model

N° Homol. T-1003

G) Chambre de combustion
Combustion chamber



H) Carburateur(s) ou système d'injection
Carburetor(s) or injection system



I) Collecteur d'admission
Inlet manifold



J) Collecteur d'échappement
Exhaust manifold

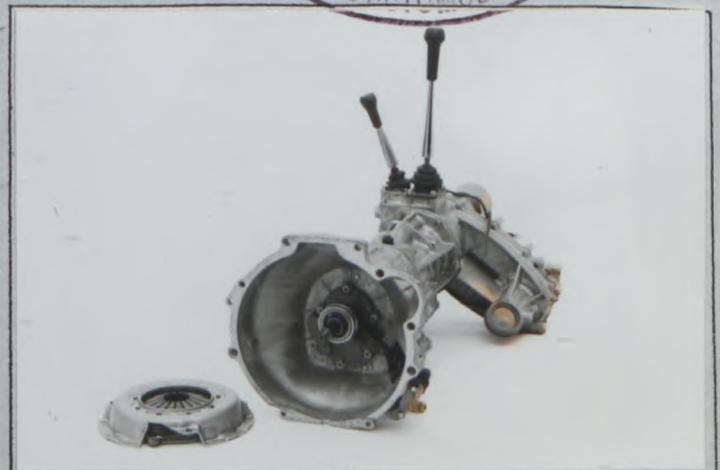


Transmission / Transmission

S) Carter de boîte de vitesse et cloche d'embrayage
Gearbox casing and clutch bellhousing



CC) Embrayage
clutch

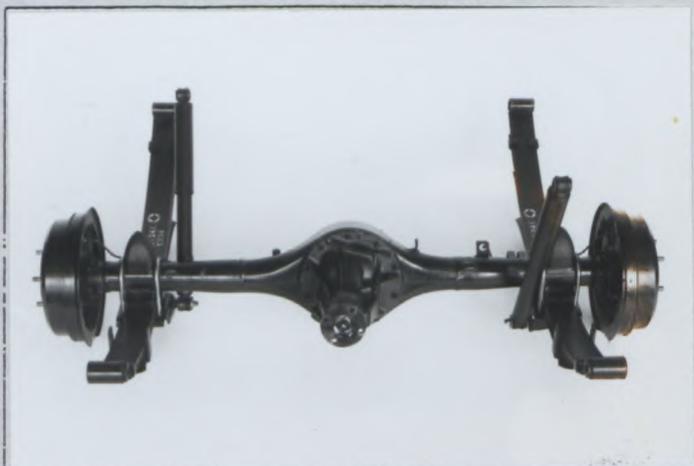


Suspension / Suspension

T) Train avant complet déposé
Complete dismantled front running gear



U) Train arrière complet déposé
Complete dismantled rear running gear



Train roulant / Running gear

V) Freins avant
Front brakes



W) Freins arrière
Rear brakes



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



Marque MITSUBISHI
Make

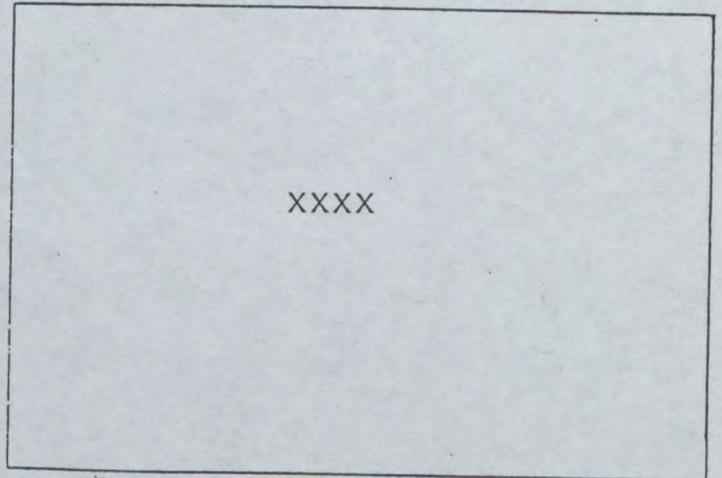
Modele PAJERO (L049G)
Model

N° Homol. T-1003

Carrosserie / Bodywork

X) Tableau de bord
Dashboard

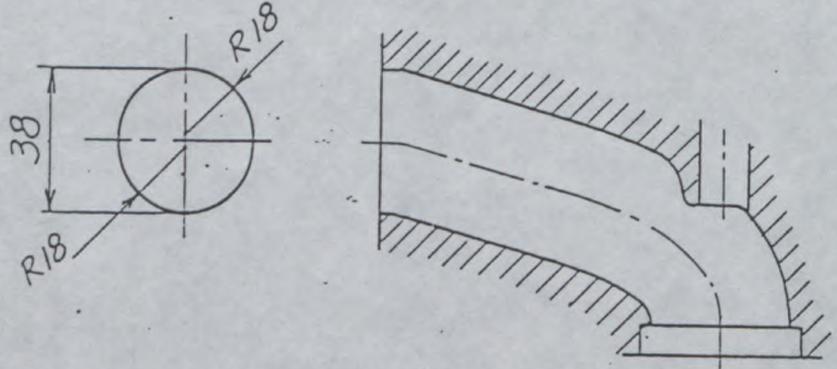
Y) Toit ouvrant
Sunroof



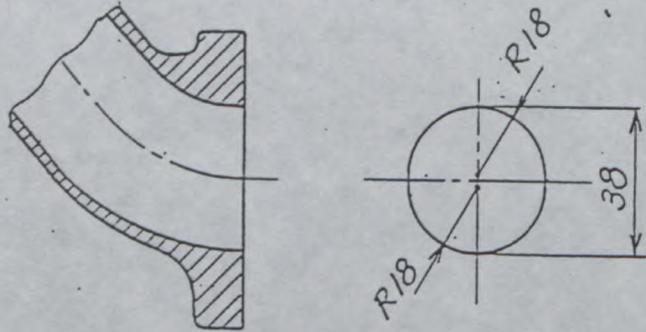
DESSINS / DRAWINGS

Moteur / Engine

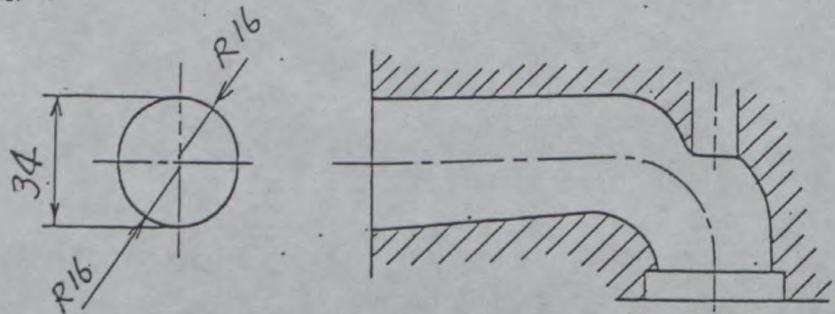
- I Orifices d'admission de la culasse, face collecteur (tolérances sur dimensions: -2%, +4%)
 Cylinderhead inlet ports, manifold side (tolerances on dimensions: -2%, +4%)



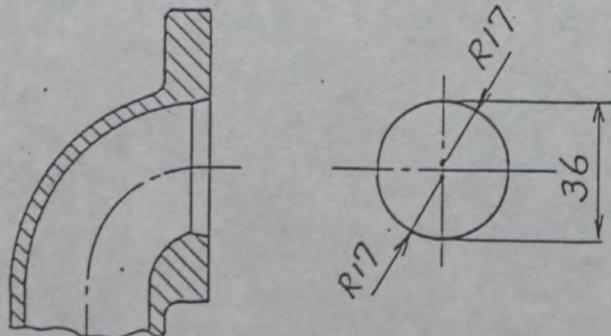
- II Orifices du collecteur d'admission, côté culasse (tolérances sur dimensions: -2%, +4%)
 Inlet manifold ports, cylinderhead side (tolerances on dimensions: -2%, +4%)



- III Orifices d'échappement de la culasse, face collecteur (tolérances sur dimensions: -2%, +4%)
 Cylinderhead exhaust ports, manifold side (tolerances on dimensions: -2%, +4%)



- IV Orifices du collecteur d'échappement, côté culasse (tolérances sur dimensions: -2%, +4%)
 Exhaust manifold ports, cylinderhead side (tolerances on dimensions: -2%, +4%)



Marque
Make MITSUBISHI

Modèle
Model PAJERO (L049G)

N° Homol. T-1003

Suspension / Suspension

✓V 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.

XXXX





FEDERATION INTERNATIONALE DU SPORT AUTOMOBILE

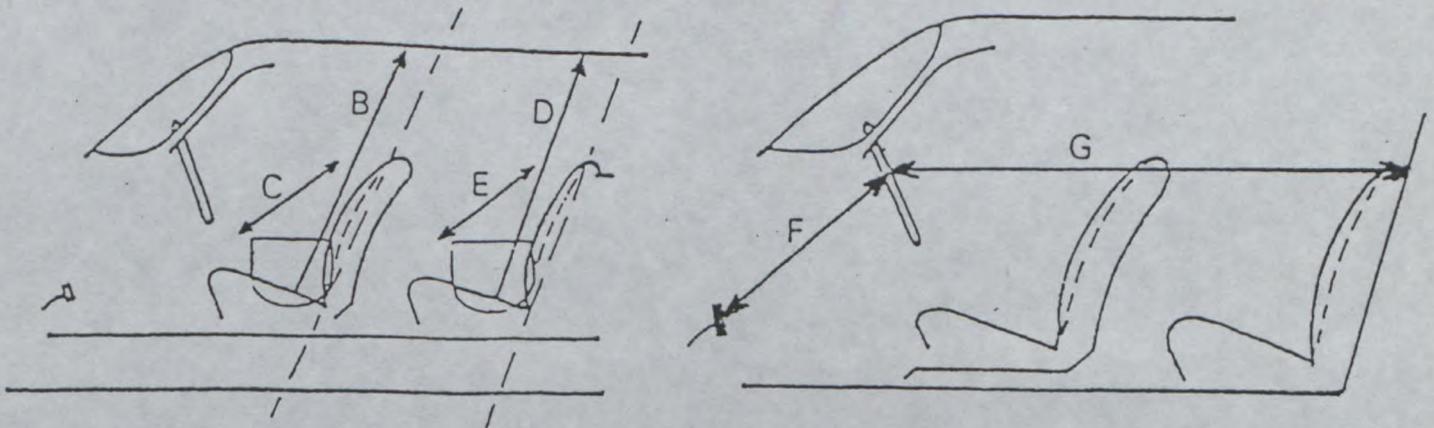
Homologation N°

T-1003

Groupe Tout-Terrain
Group

Marque MITSUBISHI MOTORS CORP. Modèle PAJERO (L049G)
Make

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)	1,060	mm
C (Largeur aux sièges avant) (Width at front seats)	1,400	mm
D (Hauteur sur sièges arrière) (Height above rear seats)	1,025	mm
E (Largeur aux sièges arrière) (Width at rear seats)	1,400	mm
F (Volant — Pédale de frein) (Steering wheel — brake pedal)	695	mm
G (Volant — paroi de separation arrière) (Steering wheel — rear bulkhead)	1,535	mm
H = F+G =	2,230	mm





FEDERATION INTERNATIONALE DU SPORT AUTOMOBILE FISA Homologation No

T-1003

JAPAN AUTOMOBILE FEDERATION

社団法人 日本自動車連盟

Group T

JAF公認番号 FT-012
JAF公認グループ
JAF発効年月日 1988年 10月31日

ADDITIONAL HOMOLOGATION FORM FOR TURBO CHARGED ENGINES
ターボチャージャーエンジンの追加公認書

Vehicle: Manufacturer MITSUBISHI MOTORS CORP Model and type PAJERO (L049G)
車商: 製造者 型式とモデル

Homologation valid as from 01 JAN. 1989 in group T
有効年月日 グループ

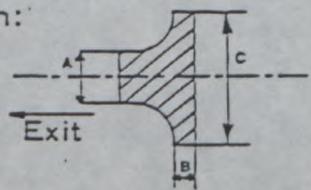
334. Turbocharging ターボチャージャー a) Make and type of the turbocharger MITSUBISHI (H.I.)
ターボチャージャーの製造者と型式

b) Turbine housing: タービンハウジング b1) Number of exhaust gas entries 1
排気ガスのタービン入口穴数
b2) Material Cast - iron
材質

c) Turbine wheel: タービンホイール c1) Material Cast - iron
材質
c2) Number of blades 12 翼の数
c3) Height(s) of blade 7.5~12.5 +0.3 -0.2 mm
翼の高さ

c4) Indicate the dimensions A, B, C, according the following sketch:
下図に従い、寸法A, B, Cを記載

A = phi40 mm +/-0.1
B = 6.7 mm +0.3, -0.15
C = phi47.2 mm +0.25

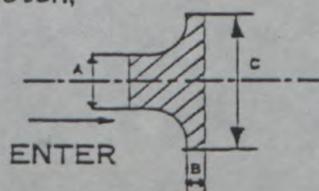


d) Impeller housing: インペラーハウジング d1) Number of air entries (gas) 1
空気取入口穴数
d2) Material Aluminum alloy
材質

e) Impeller wheel: インペラーホイール e2) Number of blades 12 翼の数
e3) Height(s) of blade 0~10.8 +0.15 -0.10 mm
翼の高さ

e4) Indicate the dimensions A, B, C, according to the following sketch,
下図に従い、寸法A, B, Cを記載

A = phi34.8 mm +/-0.1
B = 4.7 mm +0.15, -0.10
C = phi49 mm +0.15, -0.30



f) Pressure regulation:
過給圧の調整

- f1) Type of pressure adjustment: by-pass relief valve other case
過給圧調整装置の形式 バイパス リリーフバルブ 他の方式

- f2) Indicate the type of the valve and its control Swing valve
バルブの形式と制御方法 Wastegate actuator with adjustable rod

g) Exhaust system:
排気システム

Internal dimensions of the eventual exhaust pipes between exhaust manifold and turbocharger (sketch)

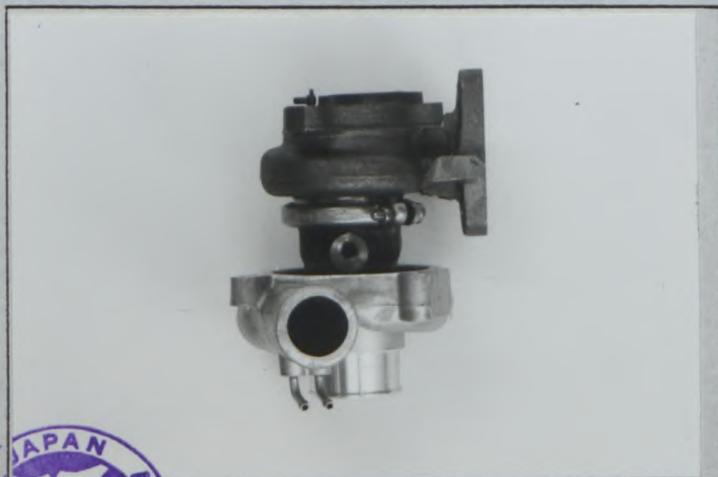
エキゾーストマニホールドとターボチャージャーの間の排気管の内部寸法(図)

The turbocharger is directly fitted in the exhaust manifold

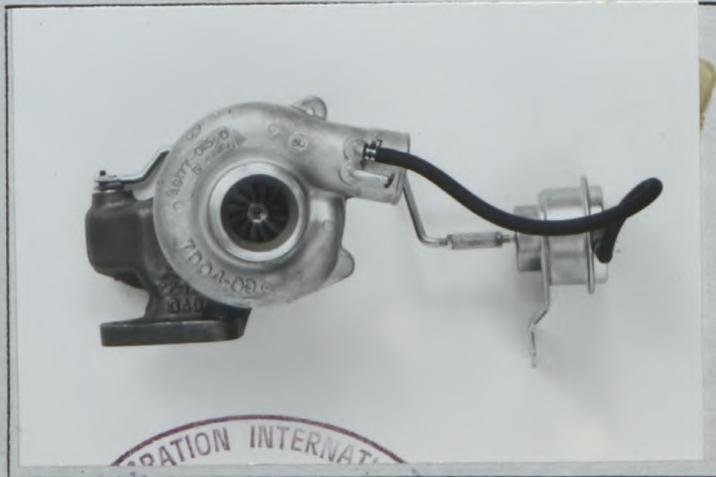
- h) Cooling of intake air : No
h1) Inter cooler : No
h2) Exchanger : No
h3) Cooling of the turbo by water : No
h4) Water injection : No

PHOTOS
写真

k) Plan view of turbocharger
ターボチャージャーの平面



L) Front view of turbocharger
ターボチャージャーの正面



M) Side view of turbocharger

ターボチャージャーの側面



N) Turbine housing of turbocharger

ターボチャージャーのタービンハウジング



O) Valve and by-pass installation of turbocharger

過給圧調整装置



P) Eventual exhaust pipes between the exhaust manifold and the turbocharger.

エキゾーストマニホールドとターボチャージャーの間の排気管

The turbocharger is directly fitted on the exhaust manifold

Q) Impeller housing of turbocharger

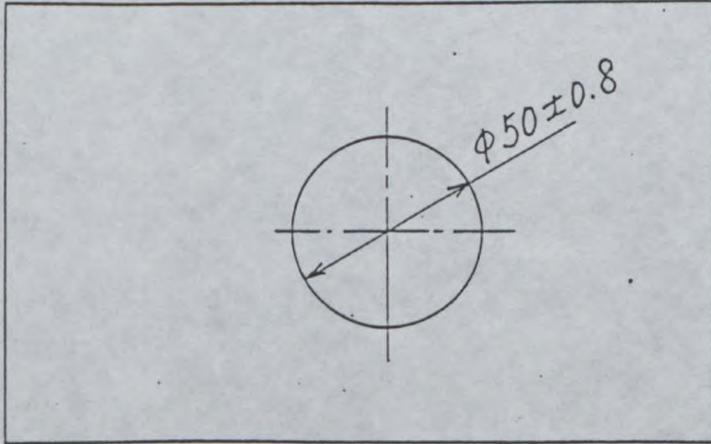
ターボチャージャーのインペラーハウジング



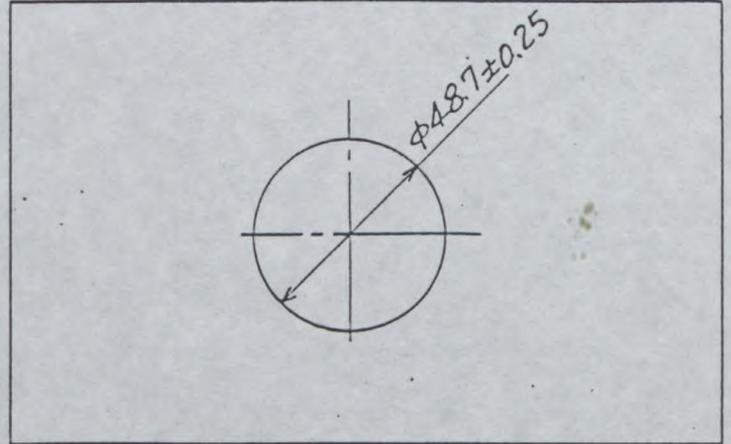
DRAWINGS

図面

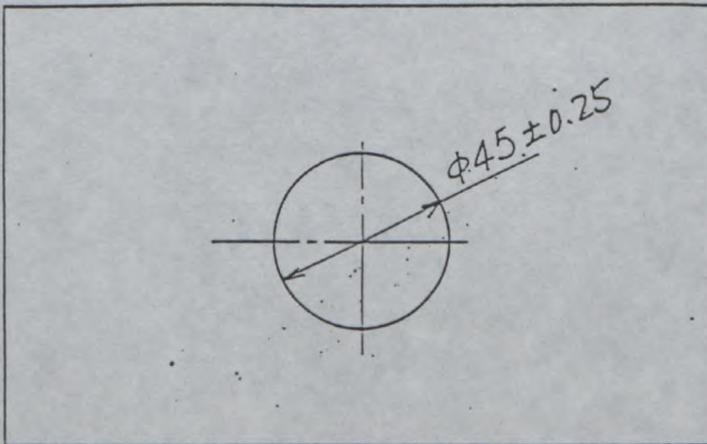
V) Exhaust gas entry in the turbine housing of turbocharger. タービンハウジングの排気ガス入口



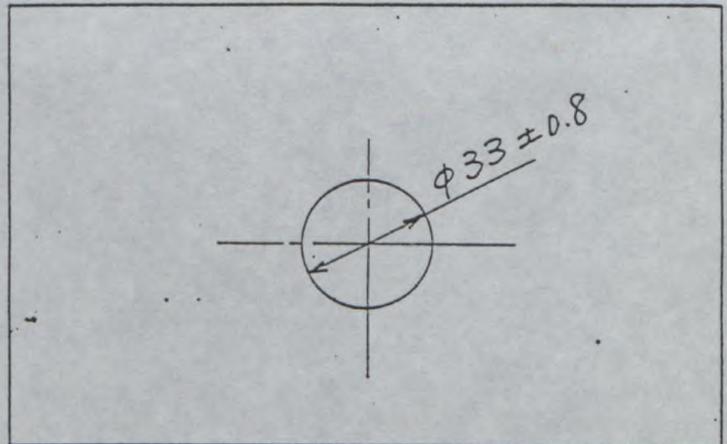
VI) Exhaust gas exit of the turbine housing of turbocharger. タービンハウジングの排気ガス出口



VII) Air (gas) entry in the impeller housing of the turbocharger インペラーハウジングの空気取入口

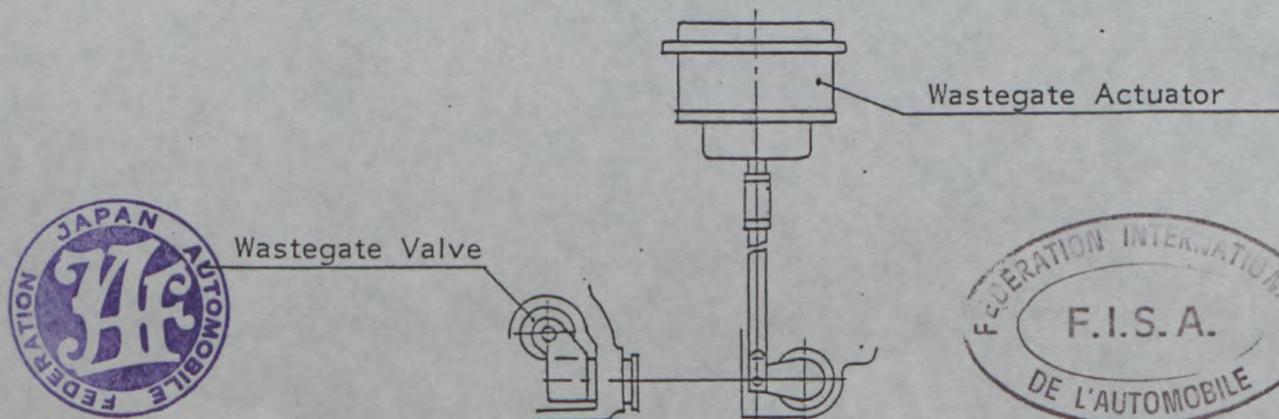


VIII) Air (gas) exit of the impeller housing of the turbocharger. インペラーハウジングの空気出口



IX) Device regulating the turbocharging pressure.

過給圧調整装置



Make MITSUBISHI
会社名

Model PAJERO (L049G)
型式

No Homol. T - 1003

No Ext. _____

JAF公認番号 _____

ADDITIONAL INFORMATION

Page or ext. ページまたは補足	Art. 項目	Description 記述
	334	
	f3)	Standard pressure : 0.77Bar
	f4)	Measuring pressure system : Pressure corresponding to an axial displacement of the wastegate control rod of 1.0mm





FEDERATION INTERNATIONALE
DU SPORT AUTOMOBILE
JAPAN AUTOMOBILE FEDERATION
社団法人 日本自動車連盟

FISA Homologation No

T-1003

Extension No

01/01ER

JAF 公認番号 FT-012ER-2/1

発効年月日 _____

FORM OF EXTENSION TO THE OFFICIAL FISA HOMOLOGATION

FISA 公認追加書式

- ES Sporting evolution of the type / スポーツ進化
- ET Normal evolution of the type / 形式の正常進化
- VF Supply variant / 供給変型
- VO Option variant / オプション変型
- ER Erratum / 誤記訂正

Homologation valid as from

01 JAN. 1989

in group

FISA グループ **T**

Manufacturer

製造者 MITSUBISHI MOTORS CORP.

Model and type

型式と形式 PAJERO WAGON TURBO (L049G)

Page or ext. ページまたは補足	Art. 項目	Description 記述
		<p>Cancel and replace photo V shown on page 16 of the basic homologation form.</p> <p>V) Front brakes</p> <div data-bbox="486 1429 1181 1892" data-label="Image"> </div>



[Handwritten Signature]
FEDERATION INTERNATIONALE
DE L'AUTOMOBILE
F.I.S.A.



FEDERATION INTERNATIONALE
DU SPORT AUTOMOBILE
JAPAN AUTOMOBILE FEDERATION

社団法人 日本自動車連盟

FISA Homologation No

T-1003

Extension No

02/01 ET

JAF 公認番号 FT-012 ET- 1/1

発効年月日 1988年 10月31日

FORM OF EXTENSION TO THE OFFICIAL FISA HOMOLOGATION

FISA 公認追加書式

- ES Sporting evolution of the type / スポーツ進化
- ET Normal evolution of the type / 形式の正常進化
- VF Supply variant / 供給変型
- VO Option variant / オプション変型
- ER Erratum / 誤記訂正

Homologation valid as from

公認発行日

01 MARS 1989

in group

FISA グループ

T

Manufacturer

製造者

MITSUBISHI MOTORS CORP.

Model and type

型式と形式

PAJERO (L049G)

Page or ext. ページまたは補足	Art. 項目	Description 記述
	Photo A1	Complete car seen from 3/4 front
	C1	Right hand view of dismantled engine
	D1	Left hand view of dismantled engine
	E1	Engine in its compartment
	S1	Gear box casing and clutch bellhousing
	CC1	Clutch



[Handwritten signature]

Make MITSUBISHI
会社名

Model PAJERO (L049G)
型式

No Homol. T-1003

PHOTOS/写真

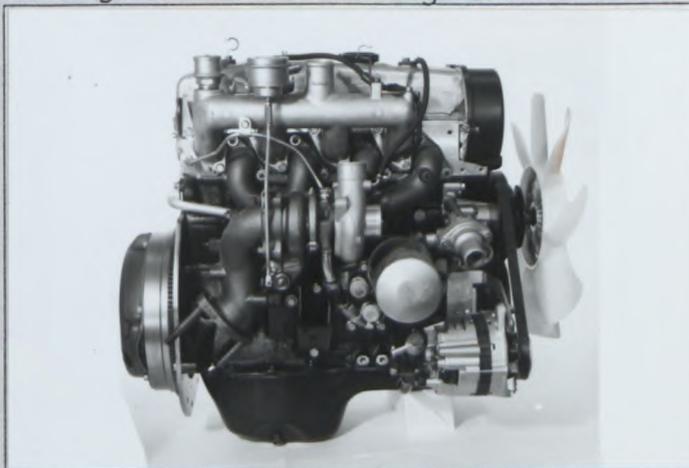
No Ext. 02/01ET

JAF公認番号 FT-012ET-1/1

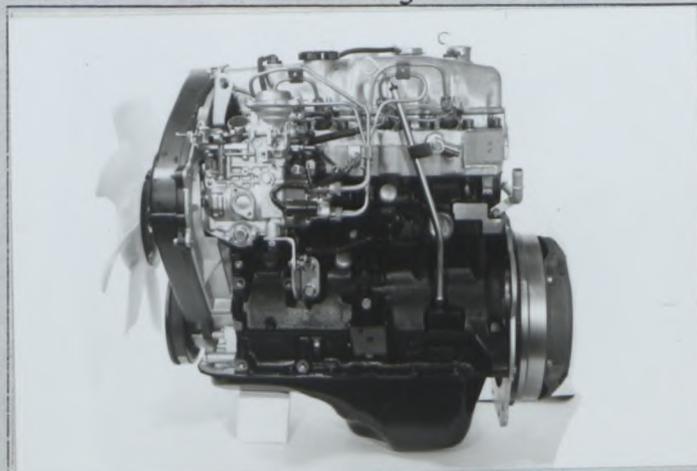
A1 Complete car seen from 3/4 front



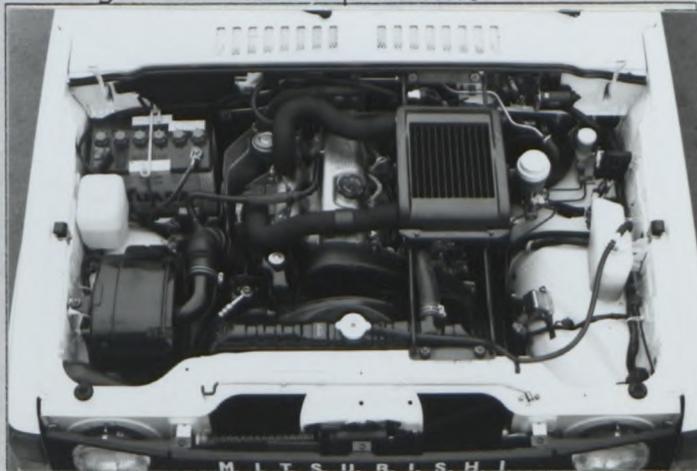
C1 Right hand view of engine



D1 Left hand view of engine



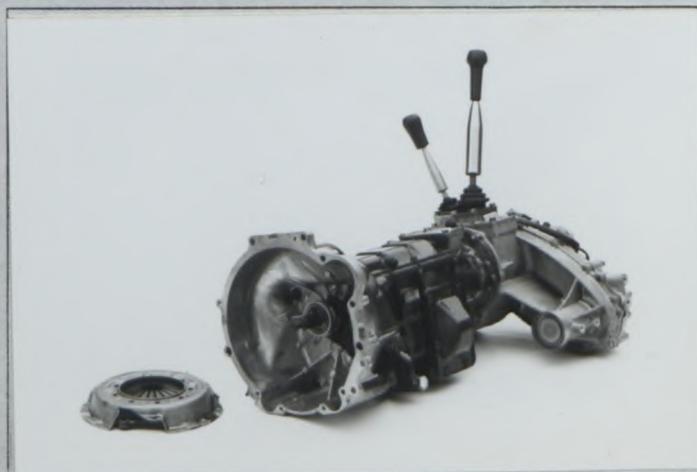
E1 Engine in its compartment



S1 Gear box casing



CC1 Clutch



Make

会社名 MITSUBISHI

Model

型式 PAJERO (L049G)

No Homol.

T-1003

No Ext.

02/01ET

JAF公認番号

FT-012ET- 1/1

Page or ext. ページまたは補足	Art. 項目	Description 記述
		<p>COMPLEMENTARY INFORMATION Body variation : High -roof version</p> <p>A2</p> 





FEDERATION INTERNATIONALE DU SPORT AUTOMOBILE FISA Homologation No

T-1003

JAPAN AUTOMOBILE FEDERATION

02/01 ET

社団法人 日本自動車連盟

JAF公認番号 **FT-012 ET- 1/1**

JAF公認グループ

JAF発効年月日 **1988年 10月31日**

Group **T**
グループ

ADDITIONAL HOMOLOGATION FORM FOR TURBO CHARGED ENGINES

ターボチャージャーエンジンの追加公認書

Vehicle : Manufacturer MITSUBISHI MOTORS CORP Model and type PAJERO (L049G)
車両: 製造者 型式とモデル

Homologation valid as from 01 MARS 1989 in group T
有効年月日 グループ

334. Turbocharging a) Make and type of the turbocharger MITSUBISHI (H.I.)
ターボチャージャー ターボチャージャーの製造者と型式

b) Turbine housing: b1) Number of exhaust gas entries 1
タービンハウジング 排気ガスのタービン入口穴数

b2) Material Cast - iron
材質

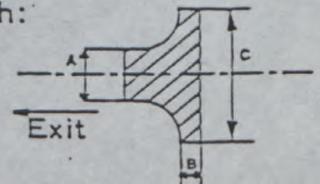
c) Turbine wheel: c1) Material Cast - iron
タービンホイール 材質

c2) Number of blades 12 c3) Height(s) of blade 7.5~12.5 $\begin{matrix} +0.3 \\ -0.2 \end{matrix}$ mm
翼の数 翼の高さ

c4) Indicate the dimensions A, B, C, according the following sketch:

下図に従い、寸法A, B, Cを記載

A = φ40 mm ± 0.1
B = 6.7 mm $\pm 0.3, -0.15$
C = φ47.2 mm $+0.25$



d) Impeller housing: d1) Number of air entries (gas) 1
インペラーハウジング 空気取入口穴数

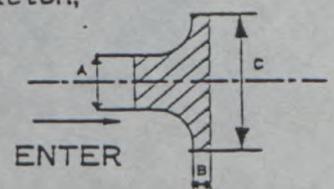
d2) Material Aluminum alloy
材質

e) Impeller wheel: e2) Number of blades 12 e3) Height(s) of blade 0~10.8 $\begin{matrix} +0.15 \\ -0.10 \end{matrix}$ mm
インペラーホイール 翼の数 翼の高さ

e4) Indicate the dimensions A, B, C, according to the following sketch,

下図に従い、寸法A, B, Cを記載

A = φ34.8 mm ± 0.1
B = 4.7 mm $+0.15, -0.10$
C = φ49 mm $+0.15, -0.30$



f) Pressure regulation:
過給圧の調整

f1) Type of pressure adjustment: by-pass relief valve other case
過給圧調整装置の形式 バイパス リリーフバルブ 他方式

f2) Indicate the type of the valve and its control Swing valve
バルブの形式と制御方法 Wastegate actuator with adjustable rod

g) Exhaust system:
排気システム

Internal dimensions of the eventual exhaust pipes between exhaust manifold and turbocharger (sketch)

エキゾーストマニホールドとターボチャージャーの間の排気管の内部寸法(図)

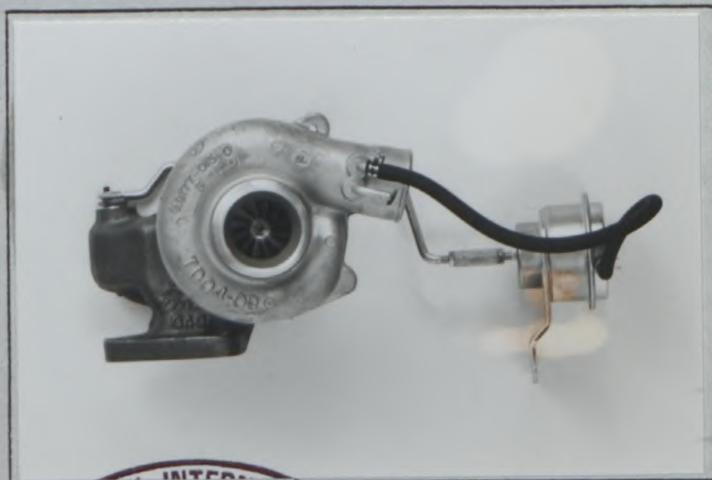
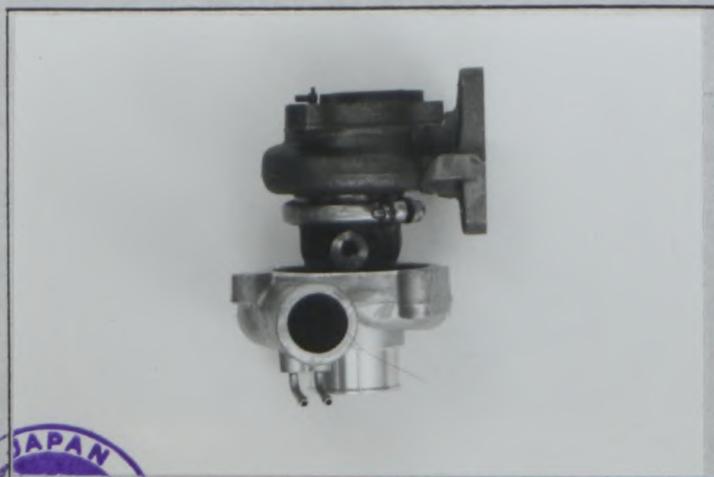
The turbocharger is directly fitted in the exhaust manifold

- h) Cooling of intake air : Yes
 h1) Intercooler : Yes
 Position of the assembly : In the engine compartment
 Inlet diameter : 43±1.5mm
 Outlet diameter : 43±1.5mm
 h2) Exchanger : No
 Position of the assembly : XXXX
 h3) Cooling of the turbo by the water : No
 h4) Water injection : No

PHOTOS
写真

k) Plan view of turbocharger
ターボチャージャーの平面

L) Front view of turbocharger
ターボチャージャーの正面



M) Side view of turbocharger

ターボチャージャーの側面



N) Turbine housing of turbocharger

ターボチャージャーのタービンハウジング



O) Valve and by-pass installation of turbocharger

過給圧調整装置



P) Eventual exhaust pipes between the exhaust manifold and the turbocharger.

エキゾーストマニホールドとターボチャージャーの間の排気管

The turbocharger is directly fitted on the exhaust manifold

h1) Intercooler

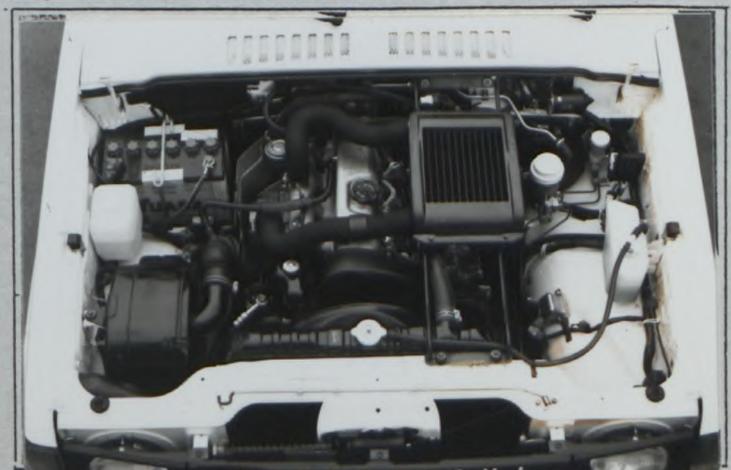


Q) Impeller housing of turbocharger

ターボチャージャーのインペラーハウジング



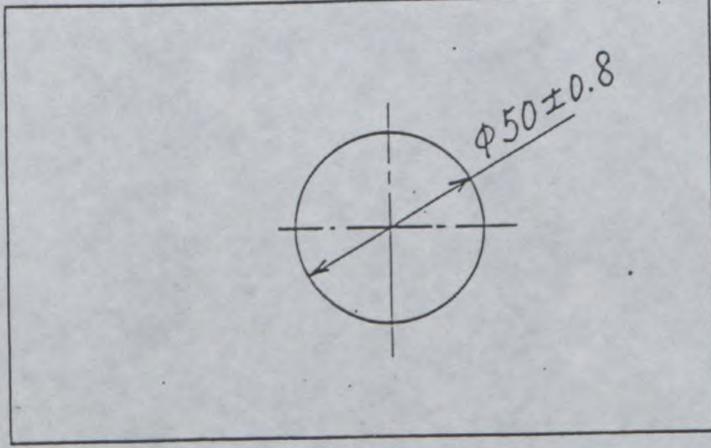
h2) Vehicle installation of intercooler



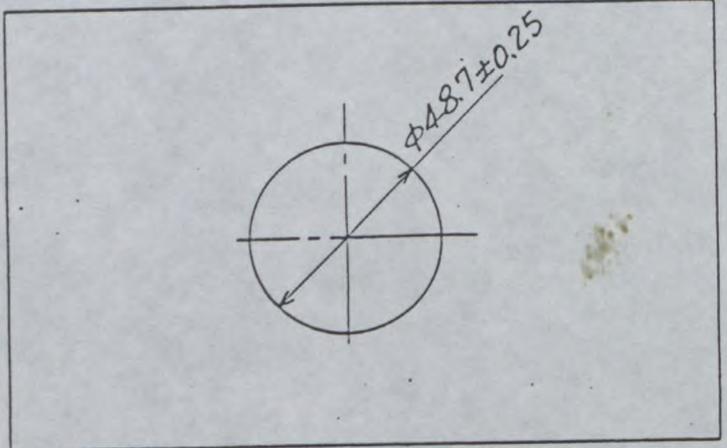
DRAWINGS

図面

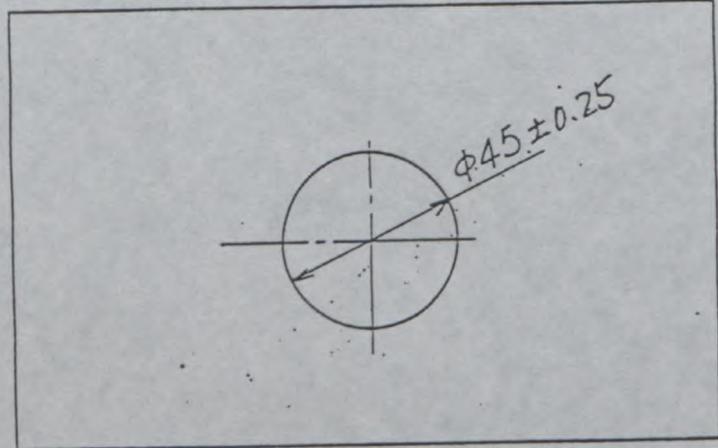
V) Exhaust gas entry in the turbine housing of turbocharger. タービンハウジングの排気ガス入口



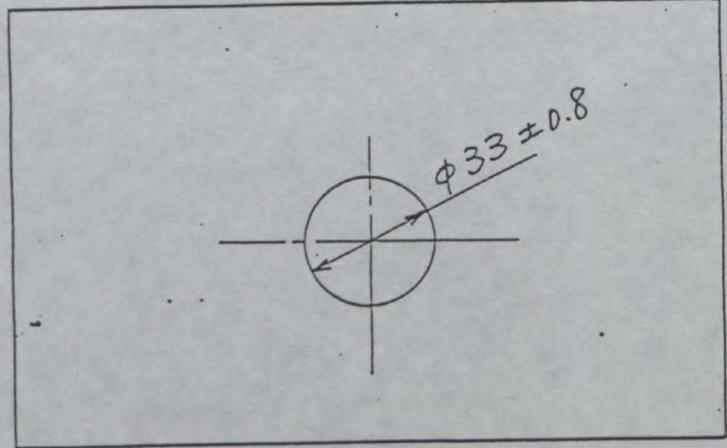
VI) Exhaust gas exit of the turbine housing of turbocharger. タービンハウジングの排気ガス出口



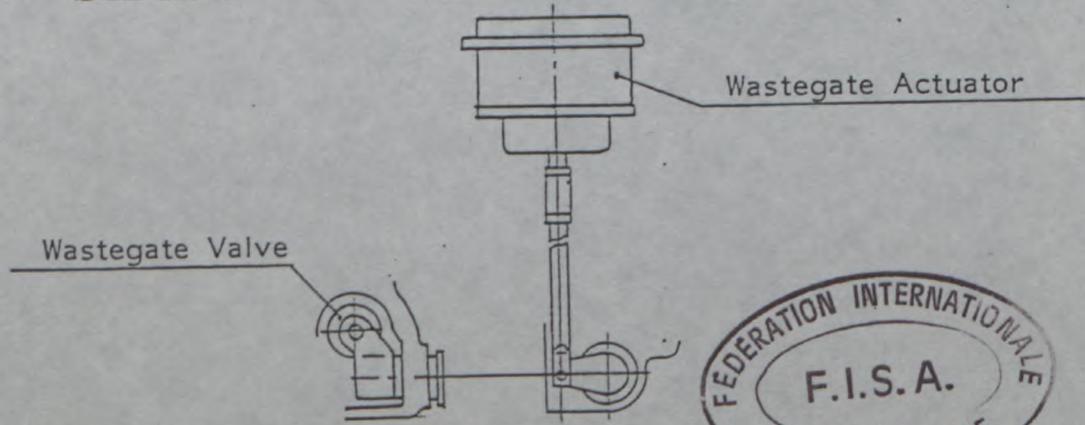
VII) Air (gas) entry in the impeller housing of the turbocharger インペラーハウジングの空気取入口



VIII) Air (gas) exit of the impeller housing of the turbocharger. インペラーハウジングの空気出口



IX) Device regulating the turbocharging pressure. 過給圧調整装置



Make MITSUBISHI
会社名

Model PAJERO (L049G)
型式

No Homol. T-1003

No Ext. 02/01 ET

For ET

JAF公認番号

ADDITIONAL INFORMATION

Page or ext. ページまたは補足	Art. 項目	Description 記述
	334	
	f3)	Standard pressure : 0.80Bar
	f4)	Measuring pressure system : Pressure corresponding to an axial displacement of the wastegate control rod of 1.0mm



Marque
Make MITSUBISHI MOTORS CORP.

Modèle
Model PAJERO WAGON TURBO (L049G)

Homologation No.

T-1003

Extension No.

03/02ER

JAF公認番号 FT-012ER-3/2

326. Distribution a) Jeu théorique de distribution admission échappement
Timing Theoretical clearance for valve timing intake 0.25 mm exhaust 0.25 mm
d) Levée de came en mm (arbre démonté)
Cam lift in mm (dismounted camshaft) (dessin / drawing Art. 325)

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	5.6			0	5.6		
-5	5.5	+5	5.5	-5	5.5	+5	5.5
-10	5.4	+10	5.4	-10	5.4	+10	5.4
-15	5.2	+15	5.2	-15	5.2	+15	5.2
-30	4.1	+30	4.1	-30	4.2	+30	4.2
-45	2.5	+45	2.5	-45	2.6	+45	2.6
-60	0.3	+60	0.3	-60	1.0	+60	1.0
-75	0.1	+75	0.1	-75	0.1	+75	0.1
-90	0.0	+90	0.0	-90	0.0	+90	0.0
-105	0.0	+105	0.0	-105	0.0	+105	0.0
-120	0.0	+120	0.0	-120	0.0	+120	0.0
-135	0.0	+135	0.0	-135	0.0	+135	0.0
-150	0.0	+150	0.0	-150	0.0	+150	0.0

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 Admission / Intake 10.0 ± 0.2 mm avec jeu selon Art. 326. a
Maximum valve lift Echappement / Exhaust 10.0 ± 0.2 mm with clearance according to Art. 326. a



FEDERATION INTERNATIONALE
DE L'AUTOMOBILE

8, place de la Concorde, 75008 Paris
Services Administratifs :
8 bis, rue Boissy d'Anglas, 75009 Paris



FEDERATION INTERNATIONALE DU SPORT AUTOMOBILE

JAPAN AUTOMOBILE FEDERATION

社団法人 日本自動車連盟

PRODUCTION CERTIFICATE

生産証明書

FT-012 ET- 1/1

Manufacturer
製造者 MITSUBISHI MOTORS CORP.

Date
年月日 16th Jan. 1989

Car Model
型式 L049G

Type or
commercial designation
タイプまたは通称名 PAJERO WAGON TURBO

Homologation No.
車両公認No. T-1003

Nature of the extension
追加公認の種類 ET

02/01 ET

	Month/year 月/年	Number 生産数
1	Oct, 1988	21
2	Nov, 1988	917
3	Dec, 1988	646
4		
5		
6		
7		
8		
9		
10		
11		
12		
TOTAL		1,584
Remarks: 注 with inter cooler		

I hereby certify that the production indicated opposite concerns cars which are entirely completed, identical and in conformity with the recognition form submitted for the said model.

右に記載された生産は、完全に完成され、また同一型式車両であり、当該型式について提出された公認書に完全に一致していることをここに証明いたします。

Signature
署名 YUKIMICHI KITANE

Position
所属役職 Vice General Manager
Passenger-car Product Planning Dept.

JAPAN AUTOMOBILE FEDERATION (JAF)





FEDERATION INTERNATIONALE DU SPORT AUTOMOBILE



JAPAN AUTOMOBILE FEDERATION

社団法人 日本自動車連盟

PRODUCTION CERTIFICATE

生産証明書

Manufacturer

製造者 MITSUBISHI MOTORS CORP. Date

Date

年月日 7TH Oct. 1988

Car Model

型式 L049G

Type or

commercial designation

タイプまたは通称名 PAJERO WAGON TURBO

Homologation No.

車両公認No. T-1003

Nature of the extension

追加公認の種類

I hereby certify that the production indicated opposite concerns cars which are entirely completed, identical and in conformity with the recognition form submitted for the said model.

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Signature

署名 Y. Kitane

YUKIMICHI KITANE

Position

所属役職 Vice General Manager

Passenger-car Product Planning Dept.

Month/year 月/年		Number 生産数
1	Sep, 1988	1,178
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
TOTAL		1,178
Remarks: 注		

JAPAN AUTOMOBILE FEDERATION (JAF)

