

FEDERATION INTERNATIONALE DE L'AUTOMOBILE8, place de la Concorde, PARIS (8<sup>e</sup>), Tél.: ANJOU 34-70HOMOLOGY-SHEET:

No.: 1200

Issued in May 1963

The model (variant) has been presented in September 1957

Make: STEYR-PUCH

type: 500 D  
500 DLKind: privat motor car  
(passenger vehicle)General designation: STEYR-PUCH 500 D mod. Fiat  
STEYR-PUCH 500 DL mod. FiatCommercial designation: STEYR-PUCH 500 D  
STEYR-PUCH 500 DL

The same chassis is used at the types 650 T/TR

4 seats provided

Manufacture begin: September 1st, 1957

Chassis No. starting with: 510.0001

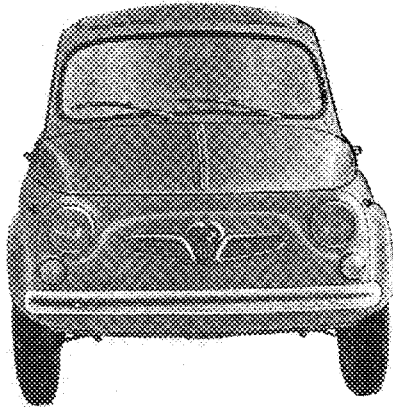
Engine No. starting with: 510.0001 Typ 500 D

Engine No. starting with: 515.0001 Typ 500 DL

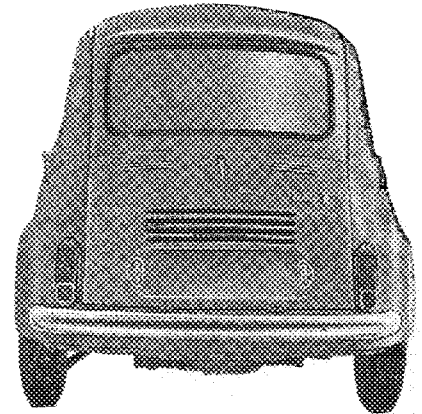
Vehicle homology in the category: TOURING  
by the F. I. A. on March 3rd, 1958

No.: 1200

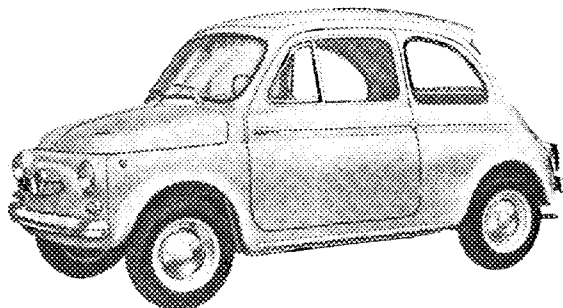
Front view of the vehicle



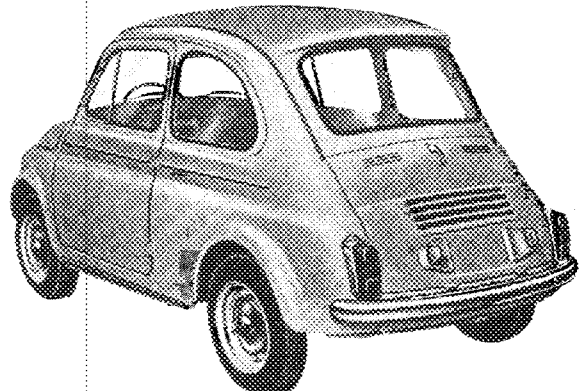
Back view of the vehicle



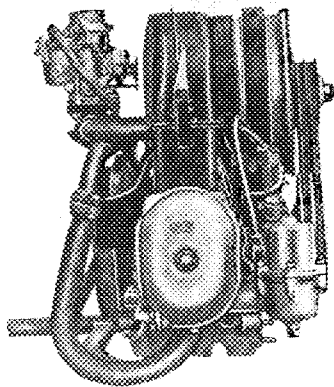
View of the vehicle - front left



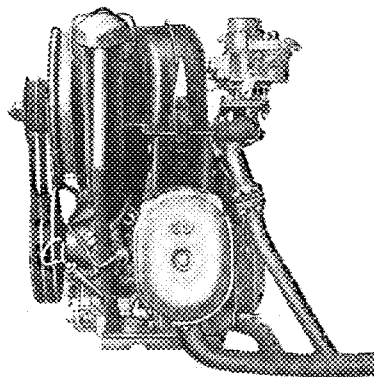
View of the vehicle - back left



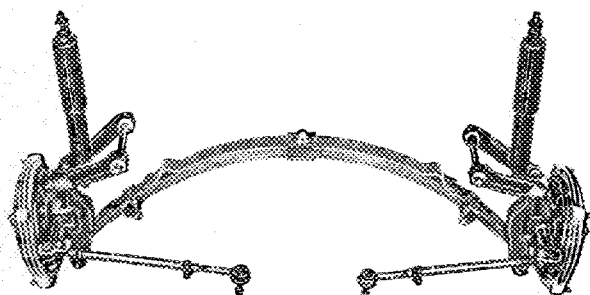
Engine view (right hand side)



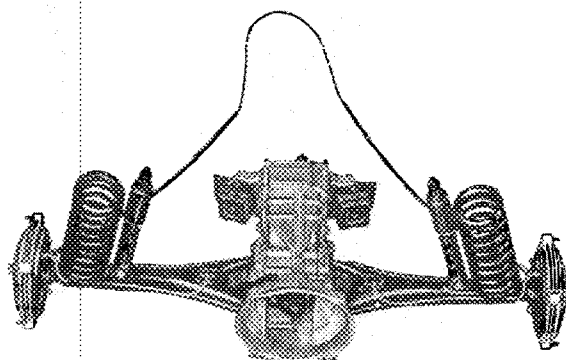
Engine view (left hand side)



Front axle complete without wheels



Rear axle complete without wheels



The same chassis is supplied for the models 500 D and 500 DL.

Primary material: Sheet steel

Additional material: Cabrio limousine with fabric top

Permissible number of seats: 4

Overall dimensions:    Width:            1.320 mm  
                                  Length:            2.695 mm  
                                  Height unladen: 1.355 mm  
                                  Height laden:    1.322 mm

Ground clearance: unladen 158 mm  
 Ground clearance: laden 120 mm

Average weight, measured on 5 vehicles, without petrol, without tool, with 1 spare wheel, without driver and without co-driver and without luggage.

Limousine (with steel top): 475 kg

Cabrio-limousine

(with fabric top): 455 kg

Wheel base:                1.840 mm  
 Track of wheels:        1.120 mm (front)    1.135 mm (rear)

Rear wheel drive    —    Rear engine    —    Power train by means of half axles

Gearing: Toothed wheel gear with 4 forward gears and 1 reverse gear

Type of gearing: Toothed wormsegment steering

ENGINE

Type:	4-stroke	
Fuel:	Petrol	
Type (conception):	O. H. V.	
Performance:	16 DIN hp. or 19,8 DIN hp.	
Number of cylinders:	2, horizontally opposed	
Cylinder bore:	70 mm $\varnothing$	Working tolerance: Tol. group I: 69.990 to 70.000 Tol. group II: 70.001 to 70.010
Stroke:	64 mm	Working tolerance: $\pm$ 0,05 mm
Capacity per cylinder:	246,3008 ccm	Engine total capacity: 492,6016 ccm
Total capacity, calculated according to the maximum tolerances:	493,1260 ccm	
Over sizes of cylinders:	70,5 mm $\varnothing$	Tolerance group I: 70.490 to 70.500 Tolerance group II: 70.501 to 70.510

Engine maximum capacity, calculated according to the maximum oversize: 499,6646 ccm

Engine capacity at maximum permissible wear of cylinders and pistons: 500,5676 ccm

Capacity of combustion chamber: 39,73 ccm or 25,93 ccm

Height measured in the middle of combustion chamber: 23 mm

Total height of the engine block without cylinder head and oil sludge: horizontally opposed engine!

Height of 1 cylinder: 100 mm

Height of cylinder head  
(outer measurements): 80 mm

Weights:

Flywheel:	5,22 kg		
Crankshaft:	5,15 kg		
Connecting rod:	0,41 kg		
Pistons for compression ratio: 1 : 7,2		without rings: 0,220 kg	with rings: 0,260 kg
Pistons for compression ratio: 1 : 10,5		without rings: 0,270 kg	with rings: 0,310 kg

Crankshaft bearing:

Number:	3	Kind: 2 bearings of lead bronze with emergency layer 1 bearing of special aluminium alloy layer
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Big end bearing:

Number:	3	Kind: Bushes of lead bronze with emergency layer
Number:	2	

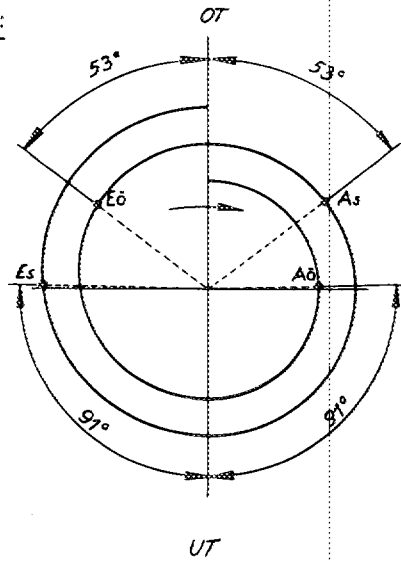
Valve clearance with cold engine:

Intake:	0,20 mm	Exhaust:	0,20 mm
Valves open:	Intake: 53° b.t.d.c. (OT)	Exhaust:	91° b.b.d.c. (UT)
Valves close:	Intake: 91° after b.d.c. (UT)	Exhaust:	53° after t.d.c. (OT)

Diameter of valves:

Intake:	35,0 mm $\varnothing$ or 38,0 mm $\varnothing$
Exhaust:	32,0 mm $\varnothing$ or 34,0 mm $\varnothing$

Valve gear diagramm:



Intake pipe:	Outside diameter: 32,0 mm	Inside diameter: 30,0 mm
	or 38,0 mm	or 35,0 mm

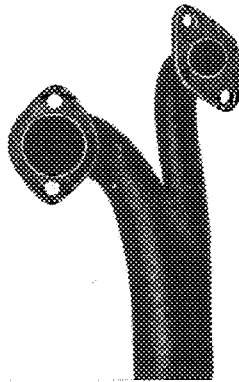
Position: Above the engine block, both cylinders together or separated leading into the silencer

Exhaust manifold:	Outside diameter: 32,0 mm	Inside diameter: 29,6 mm
	or 40,0 mm	or 36,0 mm

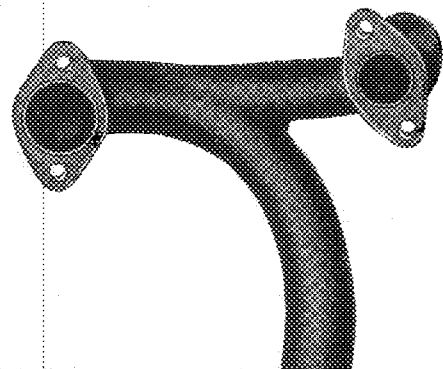
Position: Below the engine block, both cylinders together or separated pointing to the muffler

Exhaustdamping-System: Expansionset with connected chambers and one outlet hole  
or:  
Absorbtionset with 2 separated exhaust pipes  
Sound level: 85 Phon

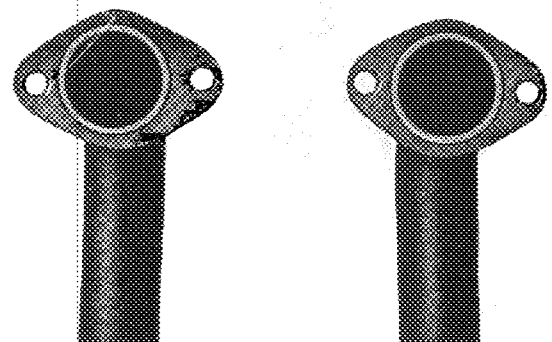
Intake pipe (detail):



Exhaust manifold (detail):

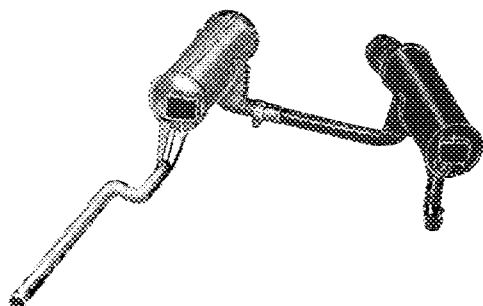


Exhaust-manifold (on detail):

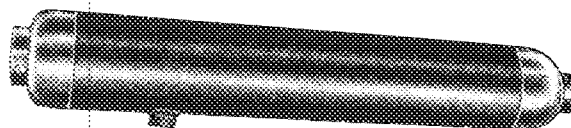


These photographs state the outlet opening  
and inlet opening at the cylinder head

Exhaust pipe: Expansions system



Exhaust pipe: Absorbtions system



Valve springs:

a) Single springs:	length: 40 mm Inside diameter: 20,4 mm	Outside diameter: 27,6 mm Number of coils: 6,5
b) Double springs:	length: 38 mm Inside diameter: 24,0 mm	Outside diameter: 31,5 mm Number of coils: 5,75
	length: 35 mm Inside diameter: 19,0 mm	Outside diameter: 24,0 mm Number of coils: 6,75

#### ATTENTION!

In connection with double springs hardfacing cam followers for camshaft can be mounted on demand.

#### CARBURETTOR:

a) Principle: down-draught	make: SOLEX	Type: 28 VFIS	Passage (outlet diameter): 28 mm
b) Principle: down-draught	make: WEBER	Type: 28 IBMS	Passage (outlet diameter): 28 mm
c) Principle: down-draught	make: SOLEX	Type: 32 PCI	Passage (outlet diameter): 32 mm
d) Principle: down-draught	make: WEBER	Type: 32 ICS	Passage (outlet diameter): 32 mm
e) Principle: down-draught	make: ZENITH	Type: 32 NDIX	Passage (outlet diameter): 2 - 32 mm
f) Principle: down-draught	make: SOLEX	Type: 40 PDSI	Passage (outlet diameter): 40 mm

Fuel feed from tank to carburettor: Mechanically driven diaphragm pump.

#### CLUTCH:

type: Single plat clutch, dry type

Diameter of clutch disc: 160 mm

**GEARING:**

Make P U C H Type Synchromesh gear with 4 forward gears and 1 reverse gear

Gear ratios:

	Gear transmission		Various ratios, supplied on demand							
	ratio	number of teeth	ratio	number of teeth	ratio	number of teeth	ratio	number of teeth	ratio	number of teeth
1	3,73	41 : 11	3,73	41 : 11	3,08	40 : 13	3,08	40 : 13	2,47	37 : 15
2	2,18	37 : 17	2,18	37 : 17	1,79	34 : 19	1,79	34 : 19	1,65	33 : 20
3	1,30	30 : 23	1,48	31 : 21	1,48	31 : 21	1,48	31 : 21	1,35	31 : 23
4	0,89	25 : 28	1,00	27 : 27	0,96	26 : 27	1,21	29 : 24	1,12	28 : 25
re-verse	5,48	$\frac{41 : 17}{25 : 11}$								

Summary of possible variations of the particular gears:

1st Gear: 38 : 15 i = 2,47	2nd Gear: 33 : 20 i = 1,65
40 : 13 i = 3,08	34 : 19 i = 1,79
41 : 11 i = 3,73	37 : 17 i = 2,18
3rd Gear: 30 : 23 i = 1,30	4th Gear: 25 : 28 i = 0,89
31 : 23 i = 1,35	26 : 27 i = 0,96
31 : 21 i = 1,48	27 : 27 i = 1,00
	28 : 25 i = 1,12
	29 : 24 i = 1,21

Both gears are shifted by column control

gear ratios	4,22	4,88	5,14
Axle drive:			
number of teeth	38 : 9	39 : 8	36 : 7

Total transmission ratio to driving wheels: The ratio is to be calculated according to transmissions of the single speeds and final drive the driver has selected.

Wheels: type - disc wheels make: KROMAG weight: (without tires) 2,85 kg

Rims: type - well base rim dimension: 3,50 x 12

tyres: type - low pressure tyres dimension: front 125 - 12 or 135 - 12 rear 125 - 12 or 135 - 12

Brakes: Primary type: foot operated brake, hydraulic, operating on all 4 wheels Secondary type: hand brake, operating on rear wheels

Number of brake cylinders: 1 brake master cylinder  
4 wheel brake cylinders

Inside diameter of brake drum: 180 mm

Outside diameter of brake drum: 235 mm

Length of one brake lining: 184 mm

Width of one brake lining: 30 mm

Type of brake linings: shape-pressed

Special hints about the brake: one circuit brake system

Fuel capacities: fuel tank: 22 l  
 engine: 1,75 l  
 gear box and  
 rear axle: 1,5 l

Cooling system: Air-cooling by fan-wheel

Kind of wheel suspension: Front: individually suspended with 1 transverse spring and wishbones  
 Rear: individually suspended with 2 coil springs

Front wheel suspension: Transverse leaf-spring with 5 spring leaves  
 total thickness of the spring at the middle: 22,5 mm  
 Width of top spring leaf: 45 mm

Rear wheel suspension: 2 coil springs  
 Outside diameter: 102 mm  
 Inside diameter: 78 mm  
 Diameter of spring wire: 12 mm  
 Number of coils: 9,5 mm

Shock absorber: number 2 front 2 rear  
 operation hydraulic

Special hints about suspension: If desired the rear suspension is available with Panhard-bar

Generator: make Bosch-dynastart type: LA/EJ/160/12/3,000 + 1,0 R 1

Voltage: Voltage 12 V performance 160 W

Battery: Voltage 12 V Capacity: 28 Ah or 32 Ah  
 If desired the battery can also be installed in the boot instead of  
 the engine compartment!

Ignition: type: battery ignition Ignition advancing: by centrifugal weight

Spark plugs: type BOSCH W 225 T or similar thread diameter: 14 mm Number per cylinder: 1

Air cleaner: type: paper-, wire gauze-, or oil-bath filter Number: 1

Oil filter: type: micronic filter, full flow type

Oil cooler: Flat tubular radiator situated in the air flow

If desired an additional air conduit for the oil cooler can be fitted for tropic use or hot  
 ambient airtemperature.

Further serial equipment: Speedometer  
 Revolution meter (if desired)  
 Cooling water thermometer is not provided  
 Oil thermometer (if desired)  
 Heating system  
 Air conditioning plant not provided  
 Head lamp, normal or asymmetric  
 Additional head lamp (if desired)  
 Trafficator - flashing direction indicator  
 Reversing light not provided  
 Internal lighting  
 Clock not provided  
 Oil pressure manometer if desired

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

8, place de la Concorde, PARIS (8<sup>e</sup>), Tél.: ANJOU 34-70

1st Supplements and corrections to the Homology form:

No.: 1200

STEYR-PUCH mod. FIAT 500 D  
500 DL

Supplements:

1st: The variant 500 DL is supplied with 2 similar petrol tanks in front, placed side by side.

2nd: An additional ventilation of the engine has been provided by inserting 2 pipelines from the valve cap to the oil filler cap.



FEDERATION INTERNATIONALE DE L'AUTOMOBILE

8, place de la Concorde, P A R I S (8<sup>e</sup>), Tel.: ANJOU 34 - 70

1st Supplements to the homologation

No.: 1200

STEYR-PUCH mod. FIAT 500 D - DL

May 1964

Supplements:

Optional Equipment:

1.) Camshaft part No. 503.1.05.013.2.

This is the camshaft of the engine TR (Hom. No. 1289).

Valve clearance with cold engine:

Intake: 0,25 mm

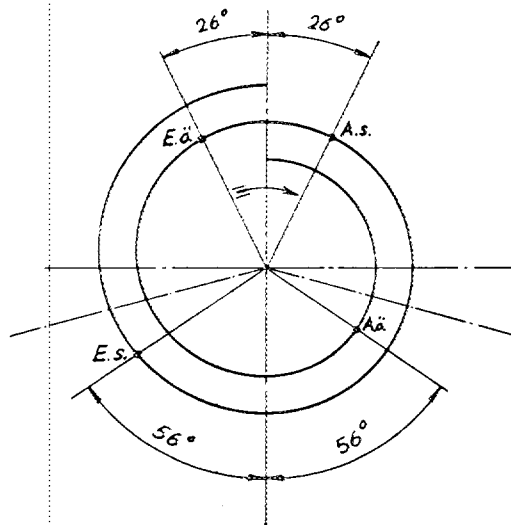
Exhaust: 0,25 mm

Maximum valve stroke:

Inlet and outlet: 8,55 mm incl. rocker clearance

Valve timing diagram:

(inspection clearance 1 mm)



2.) Engine Undershield part No. 501.1.01.034.2

3.) Gear set for 3rd speed: 33 : 20  $t = 1,65$

4.) Panhard stabilizer rods:

1 for the front axle

2 for the rear axle

These are the Panhard stabilizer rods which are also installed in the model TR (Homology No. 1289).



Übersetzungsverhältnisse Typ „B“, Vollsynchrongetriebe

	Getriebe-Übersetzung		Wahlweise lieferbare Übersetzungen							
	Verhältnis	Anzahl der Zähne	Verhältnis	Anzahl der Zähne	Verhältnis	Anzahl der Zähne	Verhältnis	Anzahl der Zähne	Verhältnis	Anzahl der Zähne
1	3,73	41:11	3,08	40:13	3,73	41:11				
2	2,18	37:17	1,84	35:19	2,18	37:17				
3	1,30	30:23	1,41	31:22	1,35	31:23				
4	0,89	25:28	0,96	26:27	0,93	25:27				
Rückwärts	3,55	39:24 24:11								

**Hinterachsantrieb :**

Auf Wunsch geänderte Hinterachsübersetzung:

Verhältnis	Zähnezahlen
$i=4,22$	38 : 9
$i=4,88$	39 : 8
$i=5,14$	36 : 7

Übrige Daten unverändert.

**STEYR-DAIMLER-PUCH**  
Aktiengesellschaft

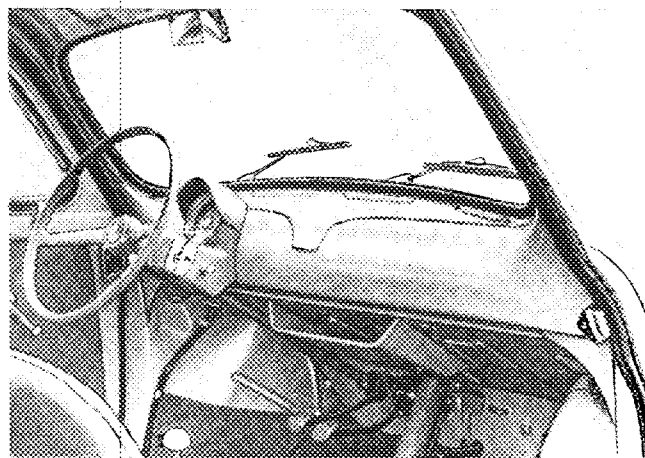
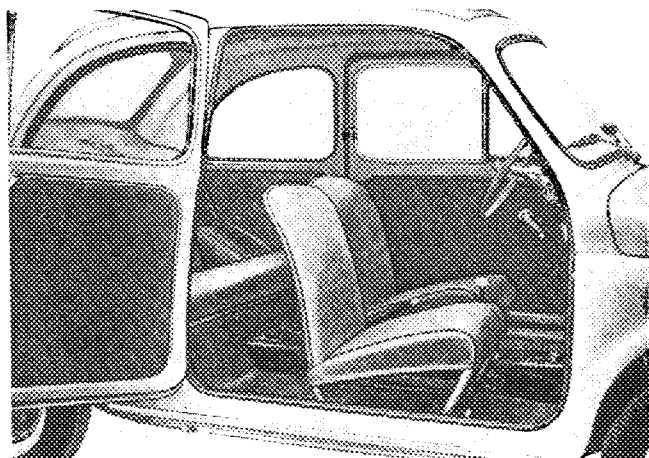
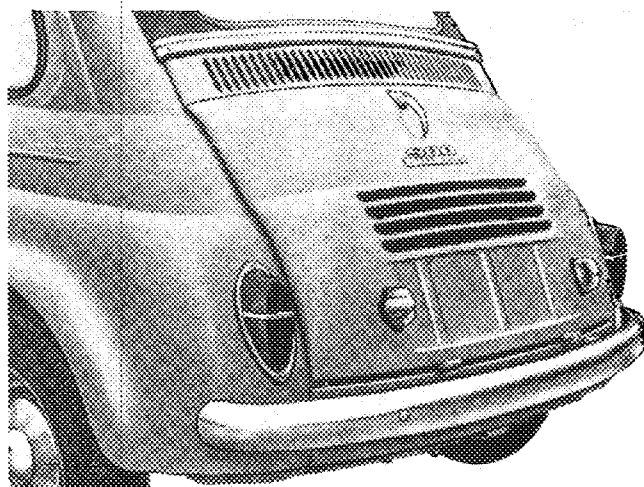
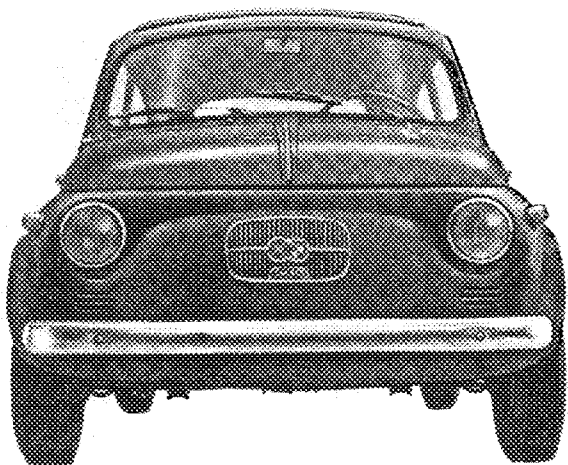
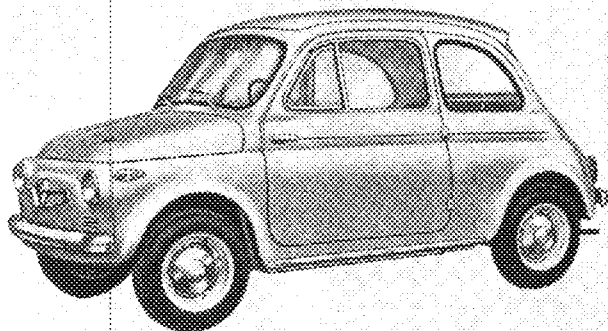
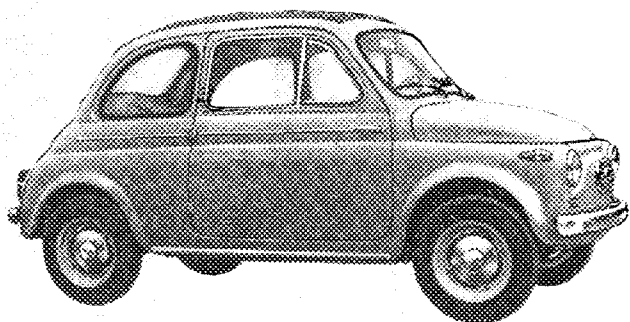
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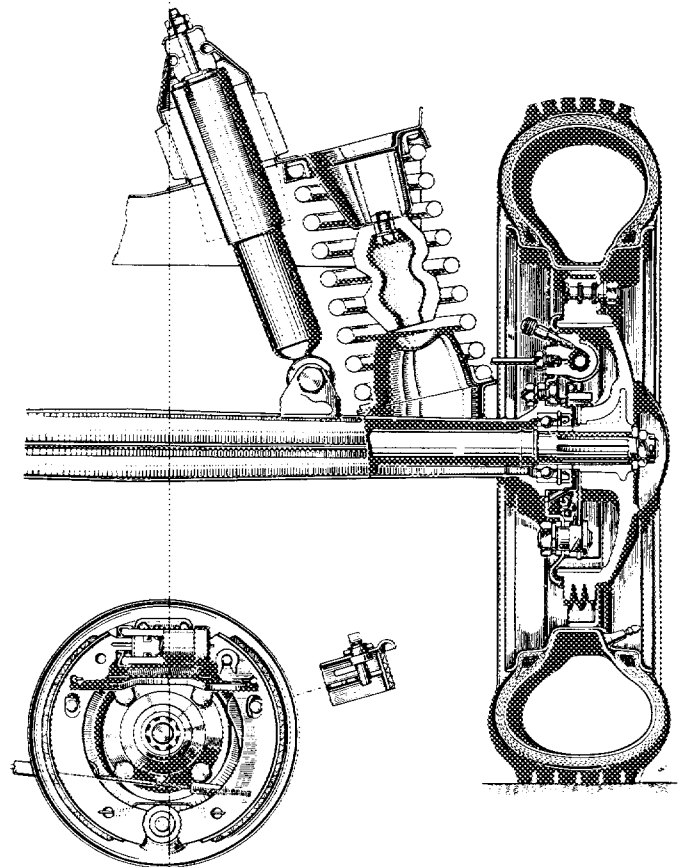
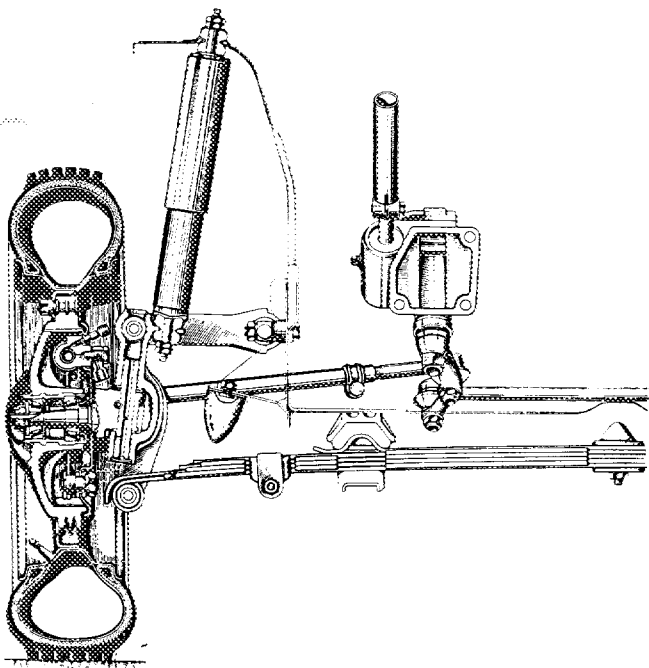
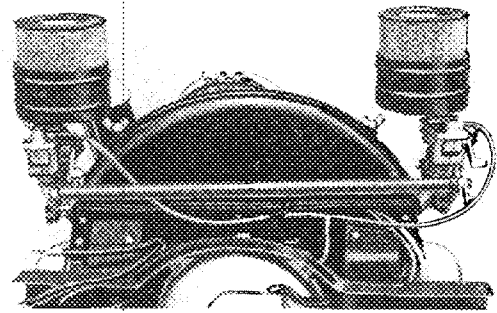
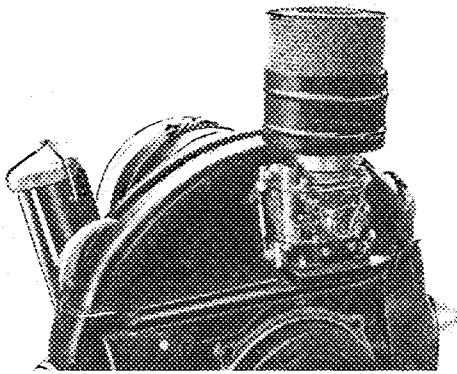
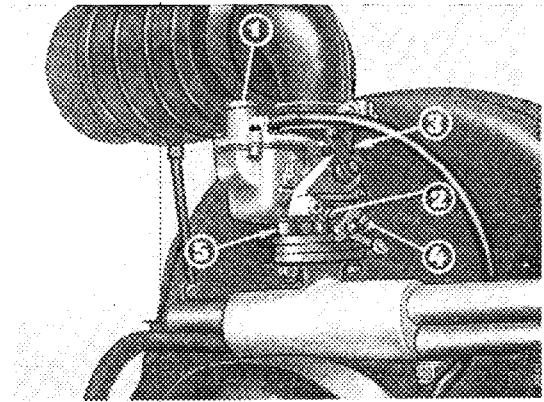
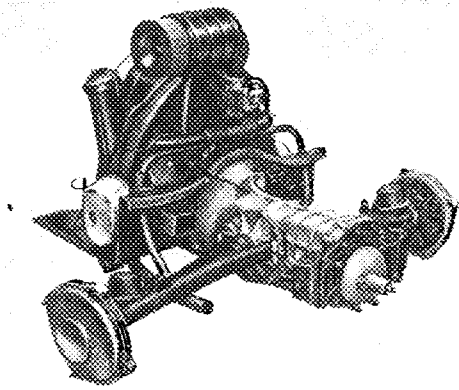
F. I. A.

C. T. I.

## Beilage zum Homologierungsblatt (Testblatt)

Steyr-Puch 500 (D) — Mod. Fiat





## HOMOLOGIERUNGSBLATT

### Bezeichnung des Wagens:

STEYR-PUCH "500" Mod. Fiat (Cabrio-Limousine)  
STEYR-PUCH "500 D" Mod. Fiat (Limousine)

### Erzeugerfirma:

STEYR DAIMLER PUCH A.G., Werke Graz.

### Vorsetznummer und Buchstaben der Typenreihe:

Fahrgestell-Nr. ab 510.0001  
Motor-Nr. ab 510.0001  
Fahrzeug-Nr. ab 500.5501

### Beschreibung der Karosserie:

Torsionssteifer Plattformrahmen mit dem Aufbau zu einer selbsttragenden Karosserie verschweißt. Ausführung als Cabrio-Limousine oder Limousine, 2 Türen mit Schwenk- und Kurbelfenstern, 2 vorklappbare Vordersitze, rückwärtige Sitzbank, Kotbleche in den Seitenwänden eingebaut, eingebaute Scheinwerfer, zu öffnende Motorhaube rückwärts, Stoßstange vorne und hinten, Lüftung und Heizung, kleiner Gepäckraum unter der vorderen Haube.

### Beschreibung des Motorblocks:

Luftgekühlter 2-Zylinder 4-Takt-Boxer-Motor im Heck des Fahrzeuges befindlich, obengesteuert (o.h.v.), je 2 schrägliegende Ventile pro Zylinder, 3-fach gelagerte Kurbelwelle, Leichtmetall-Guß-Kurbelgehäuse, austauschbare Zylinder, Zylinderköpfe aus Leichtmetall, Druckumlaufschmierung, Batteriezündung, 12 Volt-Anlage, Fallstromvergaser, Einscheiben-Trockenkupplung, 4-Gang Getriebe mit Knüppelschaltung.

### Beschreibung des Fahrwerkes:

Vorderradaufhängung mittels 2 Lenkern und 1 Querfeder und 2 Teleskopstoßdämpfern, rückwärts Pedalachse mit Schraubenfedern und Teleskopstoßdämpfern, hydraulische Bremse auf alle 4 Räder, Handbremse auf die Hinterräder wirkend.

### Gewicht des fahrfertigen Wagens:

Cabrio-Limousine: 460 kg  
Limousine: 480 kg  
Gewichte einschl. Treibstoff, 5 % Mindergewicht zugelassen.

Radstand: 1840 mm

Spur vorne: 1120 mm

Spur hinten: 1135 mm

Räder:

Felgendimension 3.50 x 12  
Reifendimension 125 - 12.

Motor:

2 Zylinder in Boxer-Anordnung, Bohrung mal Hub = 70 x 64  
Gesamtzylinderinhalt = ~~493~~ ccm  
wahlweise ausgestattet mit

- a) 1 Vergaser Marke Weber 28 IDMS oder  
1 Vergaser Marke Solex 28 VFIS  
oder gegen Aufzahlung
- b) 1 Vergaser Marke Solex 32 PCI  
oder ebenfalls gegen Aufzahlung
- c) 2 Vergaser Marke Solex 32 PCI oder  
1 Doppelvergaser Marke Pellag-Zenith 32 NDIX

Zündsystem: Batteriezündung

Zündverteiler: Marke Bosch, Typ VJ 2 PR 4

Lichtmaschine: Marke Bosch, Typ LA/EJ 160/12/2900 + 1,0 R 1,  
240 Watt.

Getriebe:

Anzahl der Übersetzungen: 4 Vorwärtsgänge  
1 Rückwärtsgang

Übersetzungsverhältnisse der Vorwärtsgänge:

- a)
- im 1. Gang 3,73 Zähnezahl der im Eingriff befindl. Räder 41 : 11
- im 2. Gang 2,18 " " 37 : 17
- im 3. Gang 1,30 " " 30 : 23
- im 4. Gang 0,89 " " 25 : 28

oder auf besonderem Wunsch

- b)
- im 1. Gang 3,08 " " 40 : 13
- im 2. Gang 1,79 " " 34 : 19
- im 3. Gang ~~1,21~~ 1,48 " " 31:21 ~~29 : 24~~
- im 4. Gang ~~0,89~~ 1,00 " " 27:27 ~~25 : 28~~

Hinterachsübersetzung:

i = 5,14

## HOMOLOGIERUNGSBLATT

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STEYR-PUCH "500" Mod. Fiat (Cabrio-Limousine)  
STEYR-PUCH "500 D" Mod. Fiat (Limousine)

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Cabrio-Limousine: 460 kg  
Limousine: 480 kg  
Gewichte einschl. Treibstoff, 5 % Mindergewicht zugelassen.

Radstand: 1840 mm

Spur vorne: 1120 mm

Spur hinten: 1135 mm



Räder:

Felgendimension 3.50 x 12  
Reifendimension 125 - 12

Motor:

2 Zylinder in Boxer-Anordnung, Bohrung mal Hub = 70 x 64  
Gesamtzylinderinhalt = 493 ccm  
wahlweise ausgestattet mit

- a) 1 Vergaser Marke Weber 28 IBMS oder  
1 Vergaser Marke Solex 28 VFIS  
oder gegen Aufzahlung
- b) 1 Vergaser Marke Solex 32 PCI  
oder ebenfalls gegen Aufzahlung
- c) ~~2 Vergaser Marke Solex 32 PCI~~ oder  
1 Doppelvergaser Marke Pallas-Zenith 32 NDIX

Zündsystem: Batteriezündung

Zündverteiler: Marke Bosch, Typ VJ 2 PR 4

Lichtmaschine: Marke Bosch, Typ LA/EJ 160/12/2900 + 1,0 R 1,  
240 Watt.

Getriebe:

Anzahl der Übersetzungen: 4 Vorwärtsgänge  
1 Rückwärtsgang

Übersetzungsverhältnisse der Vorwärtsgänge:

a)  
im 1. Gang 3,73 Zähnezahl der im Eingriff befindl. Räder 41 : 11  
im 2. Gang 2,18 " " 37 : 17  
im 3. Gang 1,30 " " 30 : 23  
im 4. Gang 0,89 " " 25 : 28

oder auf besonderem Wunsch

b)  
im 1. Gang 3,08 " " 40 : 13  
im 2. Gang 1,79 " " 34 : 19  
im 3. Gang ~~1,21~~ 1,48 " " 34 : 24  
im 4. Gang ~~0,89~~ 1,00 " " 27 : 27 ~~25 : 26~~

Hinterachsübersetzung:

i = 5,14

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

8, place de la Concorde, PARIS (8<sup>e</sup>), Tel.: ANKOU 34 - 70

3rd Supplements and Corrections to the homolog

No. 1200

STEYR-PUCH sed, FIAT 500 D - CL

March 1965

Correction:

The last sheet for supplements concerning crossshaft, engine undershield, gear set and panhard stabilizer rods should properly read "2nd Supplements" and not, as quoted at the left heading: 1st Supplements.

Supplements:

CARBURETTOR:

- a) Principle: down-draught make: SOLDI Type: 32 PCI Passage (outlet diameter): 32 mm Ø
- b) Principle: down-draught make: WEBER Type: 32 105 Passage (outlet diameter): 32 mm Ø