REGISTRO AVRELIA

c/o Roberto Pozzi Via Giovanni da Procida 8 – 20149 Milano – Telefono e fax (02) 34.48.95 – e-mail registroaurelia@mac.com – www.registroaurelia.com

REGISTRO DI PRODUZIONE LANCIA AVRELIA B 24s 1009

DATA DI MONTAGGIO	**9-3-1955**
DATA DI COLLAUDO	**6-5-1955**
DATA DI FINIZIONE	**6-5-1955**
DATA INVIO A RIMESSA	**6-5-1955**
COLORE	**grigio**
SELLERIA	**Pelle chiara**
NUMERO DI SCOCCA	**0010**
NUMERO DI MOTORE	**1065**
NUMERO PROPULSORE DIFFERENZIALE	**169**
NUMERO SOSPENSIONE ANTERIORE	**11**
NUMERO GUIDA	**172**

Milano, 12/01/2017

La segreteria

LANCIA & C.

TIPO Aurelia SERIE B24S

Data Montagg	N. di costruzione	N di vendita	DATE INVIO A Carrozz	Collaudo	Finizione	RIMESSA	Tipo di Vettura	Colore	Selleria	Note Particolari	N° Scocca	N° Motore	N° Cambio Vel.	N° Prop. Differ.	N° Sosp. Anter.	N° Giun
16-12-54		1001		21-12-54	21-12-54	23-12-54		Beige	Pelle	Estate						
11-1-55		1002		11-1-55	11-1-55	11-1-55		Grigio	"	Roma						
"		1003		24-1-55	24-1-55	24-1-55		"	"	"						
31-1-55		1004		18-2-55	18-2-55	18-2-55		"	"	"						
4-3-55		1005		27-4-55	27-4-55	27-4-55		"	"	"						
5-3-55		1006		9-4-55	19-4-55	19-4-55		"	"	"						
7-3-55		1007		21-4-55	21-4-55	21-4-55		"	"	"						
8-3-55		1008		22-4-55	22-4-55	22-4-55		"	"	"						
9-3-55		1009		6-5-55	6-5-55	6-5-55		"	"	Chiara	0010	1005		10?	?	
"		1010														
10-3-55		1011														
11-3-55		1012														
"		1013														
14-3-55		1014														
17-3-55		1015														
"		1016														
"		1017														
18-3-55		1018														
18-3-55		1019														
24-3-55		1020														
25-3-55		1021														
29-3-55		1022														

INVOICE

ROBERT GUSTAFSON
983 E. NARROWLEAF CT.
GILBERT, AZ 85298
 # 602-7361555

10/26/2021

1956 LANCIA B24

MILEAGE
LIC

Technician	Job	Payment Terms
CUB GUSTAFSON	SERVICE	Due upon receipt

GRAND TOTAL $ 17,575.00

DIAGNOSE FRONT SUSPENSION / HYD FLUID LEAKING

FRONT SUSPENSION COIL SPRINGS WORN OUT / RPL COILS REMOVED FRONT AXLE ASSEMBLY / MACHINE TOOLS / WRENCHES AND SOCKETS / FOUND FRONT SHOCKS TO HAVE BEEN RECENTLY APART / SERVICED BY OUT-OF- TOWN SHOP / CONTACTED AND SHIPPED PARTS TO CALIFORNIA TO BE INSPECTED / PARTS WERE RE-MACHINED AND ALL NEW SEALS / O-RINGS RPL / DELIVERED REST OF FRONT SUSPENSION TO BE INSPECTED AT CALIFORNIA SHOP. RE-ASSEMBLED / INSTALLED INTO CHASSY / RPL TOP OIL SEALS / RPL POP OFF VALVE BEARINGS & SPRINGS / RPL BLEED SCREWS / SCREW THREADS AND HEADS WERE STRIPPED / BLEED SYSTEM AND TEST DRIVE. VEHICLE CONTISNUES TO HAVE AN ISSUE WITH FLUID LEAKING. PULLED FRONT SUSPENSION BACK OUT OF CHASSY / DISMANTLE INSPECTED SEALS AGAIN / FOUND INTERNAL VALVING TO BE POSSIBLY INSTALLED IMPROPERLY / VERIFIED WITH TECH FROM THE UK SHOP! / FLUSHED OUT HYD FLUID THOROUGHLY TO NOT CONTANIMATE NEW RECOMMENDED ROCK OIL FLUID WITH ANTI FOAMING AGENT / SOURCE SVI-20 HYD ROCK OIL ASSEMBLE FRONT SUSPENSION / REINSTALL TWO CHASSY / BLEED SYSTEM THOROGHLY / TEST DRIVE
****NOTE: HYDRAULIC RESEVOIR VALVES WERE NOT SEALING CLOSED AFTER INITIAL BLEEDING WAS DONE. LABOR HRS 40.0**
CONTINUE:

ORDER HYDRAULIC RESERVOIR KIT FROM U.K.
REBUILD RESEROIR / REPLACE VALVES / GASKETS / SPRINGS / BALL BEARINGS. REINSTALLED INTO CHASSY / PRIME SYSTEM TEST DRIVE ON THREE TO FIVE MILE TEST OVER THREE DAYS.
LABOR HRS 4.0

<u>OIL LEAK?</u>

OIL LEAK / REMOVE RIGHT FRONT ENGINE MOUNT BRACKET / REMOVE BOLT / FROM BRACKET / MODIFIED INTO OIL PRESSURE REGULATOR VALVE / VAT ENGIE MOUNT BRACKET TO REMOVE OIL DEBRIS / WELD HOLE IN BRACKET / REFINISH ENGINE BRACKKET TO LOOK ORIGINAL / ORDERED GASKET / INSTALLED GASKET WITH BRACKET TO ENGINE BLOCK / REINSTALLED ENGINE MOUNT / CHECKED FOR OIL LEAK / NON-FOUND.
LABOR HRS 8.0

<u>CHECK BATTERY</u>

NOTE: FOUND BATTERY SHORTED BAD CELL / RPL BATTERY REMOVED GENERATOR AND REGULATOR / SENT OUT FOR SERVICE / REINSTALL GENERATOR AND REGULATOR / CHECK CHARGING SYSTEM / CHARGING SYSTEM WORKING CORRECTLY
LABOR HRS 6.0

FOUND DEAD SHORT IN CIGARETTE LIGHTER / NEEDS TO BE REPLACED / REMOVED FUSE AT THIS TIME

<u>INTERIOR</u> TRUNK RELEASE LOCK COVER WAS BROKEN / REMOVED / ALUMINUM WELDED / STRIPPED PAINT FROM COVER BRACKET / RESTORED PAINT TO SATIN BLACK / REINSTALL COVER TO INTERIOR / REWORKED LOCK FUNCTIONS CORRECTLY
LABOR HRS 4.0

DEWAYNE OVERHAULED CARBURATOR / REINSTALLED TO INTAKE MANIFOLD / FOUND LOW FUEL PRESSURE FROM ELECTRIC FUEL PUMP / REPLACE ELECTRIC FUEL PUMP
LABOR HRS 6.0

<u>CONTINUE:</u>

AFTER TEST DRIVE / PULLED GRILL OUT / ADJUSTED STEERING BOX / ALIGNMENT / SET TOE ONLY / CAMBER SET @ CHASSY MOUNT

LABOR HRS 2.0

AFTER TEST DRIVE INSPECT WHEEL CYLINDERS LEAKING / SOURCE ALL FOUR NEW WHEEL CYLINDERS / ORDERED PARTS REMOVED DRIVE LINE / REMOVED REAR AXELS / REMOVED REAR TRANS AXEL DIFFERENTIAL / REMOVED REAR BRAKE DRUMS / INTALL NEW WHEEL CYLINDERS / CLEAN BRAKE SHOES / RPL ALL BRAKE SHOE SPRINGS / INSTALLED TRANS AXEL / REINSTALLED DRIVE SHAFT / ADJUSTED ALL DRIVE CUPPLERS / REINSTALLED REAR AXELS / TEST DRIVE / NO MORE NOISE FROM DRIVESHAFT WHILE DRIVING **LABOR HRS 33.0**

ADJUST REAR TRUNK LID / BOLTS WERE LAYING LOOSE IN TRUNK AFTER TEST DRIVE / LID OPERATES PROPERLY

LABOR HRS 0.5

TOW CAR TO DETAIL SHOP **LABOR HRS 1.5**
TOW CAR TO RESIDENCE PV **LABOR HRS 1.5**

TOTAL LABOR HOURS 106.5

OUT OF SHOP SERVICES

MACHINE SHOP / OSL	**$ 1,775.00**
SHIPPING PARTS TO CALIFORNIA	**$ 200.00**
GAS FOR TEST DRIVE	**$ 60.00**
WATER JETT WRENCHES	**$ 228.00**
CUSTOM SOCKETS	**$ 240.00**
WELDING INT BRACKET / ENGINE MT	**$ 120.00**

TOTAL OUT OF SHOP SERVICES **$ 2,623.00**

CONTINUE:

PARTS LIST

FRONT SUPENSION PARTS	**$228.00**
GASKETS / SEALS / O-RINGS	
COPPER CRUSH SEAL / PAINT	
OIL RETAINER SEALS / VALVES	
SILICONE / OIL / TEFLON	**$ 80.00**
FRONT COIL SPRINGS	**$ 600.00**
HYD RESEVIOR KIT	**$ 120.00**
SVI-20 ROCK OIL	**$ 40.00**
BATTERY	**$ 208.00**
ENGINE MT BRACKET GASKET	**$ 38.00**
CARB KIT	**$ 140.00**
ELECTRIC FUEL PUMP	**$ 85.00**
SATIN BLACK PAINT	**$ 39.00**
FRONT / REAR WHEEL CYLINDERS	**$ 480.00**
BRAKE SHOE SPRINGS (8)	**$ 96.00**
BRAKE FLUID DOT 4	**$ 18.00**

TOTAL PARTS	**$ 2,172.00**
TOTAL LABOR HRS 106.5 @ $120.00	**$ 12,780.00**
OUT OF SHOP SERVICES	**$ 2,623.00**
TOTAL PARTS	**$ 2,172.00**

GRAND TOTAL $ 17,575.00

NOTE: CAR WAS TEST DRIVEN 100 MILES BEFORE RETURNING TO OWNER. CHECKED OVER & NO ADDITIONAL LEAKS FOUND!
ALL TAXES WERE PAID ON ALL PARTS PURCHASED.

PLEASE MAKE CHECK PAYABLE TO: ROBERT GUSTAFSON

CONTINUE:

GRAND TOTAL OF REPAIRS $ 17,575.00

IRV KESSLER PRE-PAID FROM PERSONAL CH# 11756 12/8/2018 --- $ 5,000.00

BALANCE DUE $ 12,575.00

PLEASE MAKE CHECK PAYABLE TO: ROBERT GUSTAFSON

MAILING ADDRESS:

ROBERT GUSTEFSON
983 E. NARROWLEAF COURT
GILBERT AZ 85298
(602) 736-1555

INVOICE

ROBERT GUSTAFSON
1691 E. REDWOOD PLACE
CHANDLER, AZ 85286
 # 480-695-0335

DATE 6/18/2019

1956 LANCIA B24

MILEAGE
LIC

Technician	Job	Payment Terms
CUB GUSTAFSON	SERVICE	Due upon receipt

STORAGE FEE $ 1000.00

VEHICLE IS IN PRIVATE STORAGE!

NOTE:

SUSPENSION WAS REASSEMBLED & INSTALLED INTO CAR CHASSY, SHOCK VALVING WAS INCORRECT ORDERED PARTS TO CORRECT. SENT COIL SPRINGS OUT TO BE TESTED. SPRING RATE IS INCOSISTENT FROM RIGHT TO LEFT. ORDERED NEW COIL SPRINGS AS WELL. PARTS ARE SHIPPING TO ARIZONA JULY 1ST.
THIS IS ALL THE UPDATE AT THIS TIME.

SINCE ADDITIONAL PARTS WERE NEEDED, CAR WAS SHIPPED BACK TO RESIDENCE GARAGE. WILL BE PICKING BACK UP WHEN PARTS ARRIVE AT SHOP.

PLEASE MAKE CHECK PAYABLE TO: ROBERT GUSTAFSON

ROBERT GUSTAFSON
1691 E. REDWOOD PLACE
CHANDLER, AZ 85286
480-695-0335

INVOICE

ROBERT GUSTAFSON
707 W. Hemlock Way
CHANDLER, AZ 85248
 # 480-695-0335

DATE 2/20/2019

1956 LANCIA B24

MILEAGE
LIC

Technician	Job	Payment Terms
CUB GUSTAFSON	SERVICE	Due upon receipt

STORAGE FEE **$ 1000.00**

VEHICLE IS IN PRIVATE STORAGE!

NOTE:
ALL SUSPENSION PARTS FROM MACHINE SHOP ARE COMPLETED. CUSTOM TOOLS WERE DESIGNED AND MACHINED TO DISASSEMBLE & BUILD FRONT LANCIA SLIDE PILLAR SUSPENSION.

POWDER COATED PARTS ARE COMPLETED!

WAITING ON PARTS ORDERED!

PLEASE MAKE CHECK PAYABLE TO: ROBERT GUSTAFSON

ROBERT GUSTAFSON
707 W. HEMLOCK WAY
CHANDLER, AZ 85248
480-695-0335

INVOICE

ROBERT GUSTAFSON
707 W. Hemlock Way
CHANDLER, AZ 85248
 # 480-695-0335

DATE 12/10/2018

1956 LANCIA B24

MILEAGE
LIC

Technician	Job	Payment Terms
CUB GUSTAFSON	SERVICE	Due upon receipt

PARTS DEPOSIT **$ 5000.00=PAID 12/8/2018**

IRV KESSLER PAID PERSONAL CHECK # 11756

CHECK OUT FRONT SUSPENSION?

DIAGNOSE FRONT SUSPENSION / SHOCK LEAKING AND HYDRAULIC'S IN SHOCKS NOT WORKING.

REMOVED FRONT SUSPENSION FROM CHASSY DISASSEMBLED FRT. / BRAKE BACKING PLATES @ SPINDLES. DISASSEMBLED SLIDE PILLARS, ORDERED PARTS / DROP PARTS OFF FOR MACHINING.

NOTE: LABOR & ADDITIONAL PARTS NEEDED WILL BE INVOICED UPON COMPLETION OF WORK.

ROBERT GUSTAFSON
707 W. HEMLOCK WAY
CHANDLER, AZ 85248
480-695-0335

12/15/17

1956 Lancia B24 Spyder vin B24S-1009
lic 46-0864B montana

Customer requests seat back to be more angled rearward and to install lap belts
R&R seats and have upholstery shop install anti- scuff pads on seat backs- hitting boot assy and marring seats
Install lap belts, fabricate pieces as required
Complaints: windshield wipers come away from the windshield when at speed /battery issues/horn inoperative/ left door release strap fell off/ headlight switch loose in dash/ front suspension is very harsh and steering effort high with noticeable "play" in steering

Windshield wiper arm tension springs very weak: R&R, repair, set tension.
Battery: charge and test- battery bad, replace, test charging system to verify operation
Horn: system tests, repair wiring at column under dashboard
Minor repairs: install retention clip to door release strap, adjust engine idle speed, tighten retaining collar for headlight switch in dashboard, found trunk prop assy inoperative- was installed incorrectly and pivot worn causing catch/ stay system to malfunction- repair.

** front suspension, steering and worn steering items not repaired at this time due to time constraints**

LABORS $ 1,625.00

OSL	anti-scuff pad installation	549.87
2) 1431-blk	lap belt sets	116.00
1) 8434	battery inv# 3794-921957	156.51
Misc)	consumables	27.25
* sales tax on parts paid at point of purchase		--------
PARTS, OSL		$ 849.63

Balance due: **$ 2,474.63**

FMS Service 17008 E. Enterprise Dr. Suite 1 Fountain Hills, AZ 85268 480-836-7915 www.ferrariserviceaz.com

INVOICE:

Date: May 7, 2017

CUSTOMER:

Name:	Irv Kessler
Address:	6210 E Indian Bend Rd
	Paradise Valley, AZ 85253
E-mail:	kessler@walleyetrading.net
Phone:	952 334-2225

VEHICLE:

Year:	1955
Make:	Lancia
Model:	Aurelia B24 Spyder America
VIN:	B24S/1009
Mileage:	59,962

DESCRIPTION	
Repair Loose Steering Coloum	$2,800.00
Install New Bolt At Steering Box To Hold Shaft	
Repair Leaking Rear Lower Differential Cover	
Refill With 90W Ep Oil	
Tighten Up All Loose Fasteners	
Fabricate New Spacer Block Which Retains Front Grill	
Lubricate And Adjust Throttle Linkage	
Remove Convertible Top Material From Framework	
Repair And Weld Convertible Top Frame	
Match And Repaint Top Framework	
Re-Install Convertible Top	
Adjust Brakes	
Add Coolant (No-Rosion) And Filtered Water	
Check Tire Pressures	
Check Engine Oil	
Additional Labor Palacios Interior	
Labor Total:	$2,800.00
Parts Total:	$112.71
INVOICE TOTAL:	**$2,912.71**
Credit Card:	**$3,000.09**

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT PRICE	TOTAL
	Gear Oil 90W EP	1	$31.28	$31.28	$31.28
	Oil Seal Washers	12	$3.25	$2.00	$24.00
	Shop Supplies	1	$40.00	$40.00	$40.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
Misc.	Environmental Fee				$8.60
				Subtotal:	$103.88
				Tax 8.5%:	$8.83
				Parts Total:	$112.71

FERRARI MOTOR SERVICE

Vehicle : Lancia Aurelia B-24S
VIN# B24s-1009
Mileage In: 59,968
Date: March 20, 2016

Observation Report

1. Loose Bolt On Front Cover Of Engine.
2. Front Suspension Has Play Most Notably In Right Front
3. Brakes Pulling To The Right Under Easy Brake Applications
4. Steering Column Not Secure, Steering Wheel And Shaft Will Disengage
5. Windshield Wipers Not Working
6. Choke/Enrichment Not Working Correctly
7. Throttle Sticking Slightly
8. Weather Stripping Gasket On Drivers Side Door Out Of Place
9. Possible Engine Mount Has Sagged Causing Some Vibration To Be Felt Through The Chassis
10. Possible Driveshaft Balance Problem
11. Backs Of Drivers Seat And Passenger Seat Are Being Scared By Hard Contact
12. Front Grill Weather Striping Out Of Place

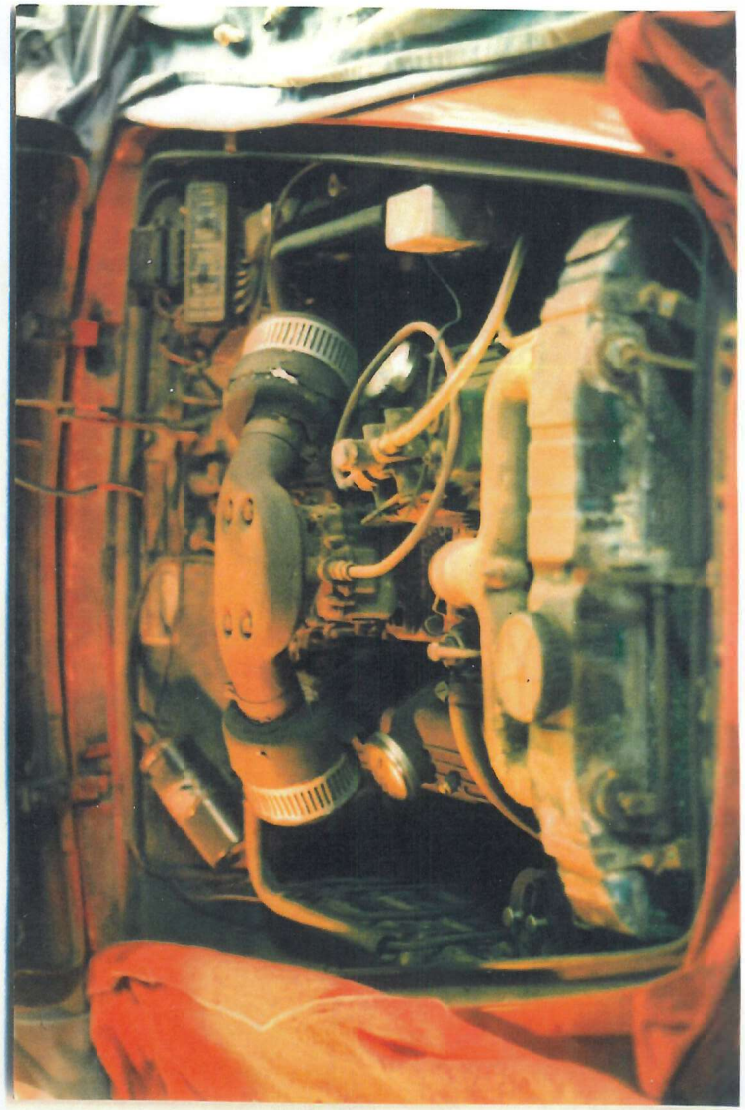
13. Backs Of Drivers Seat And Passenger Seat Are Being Scared By Hard Contact

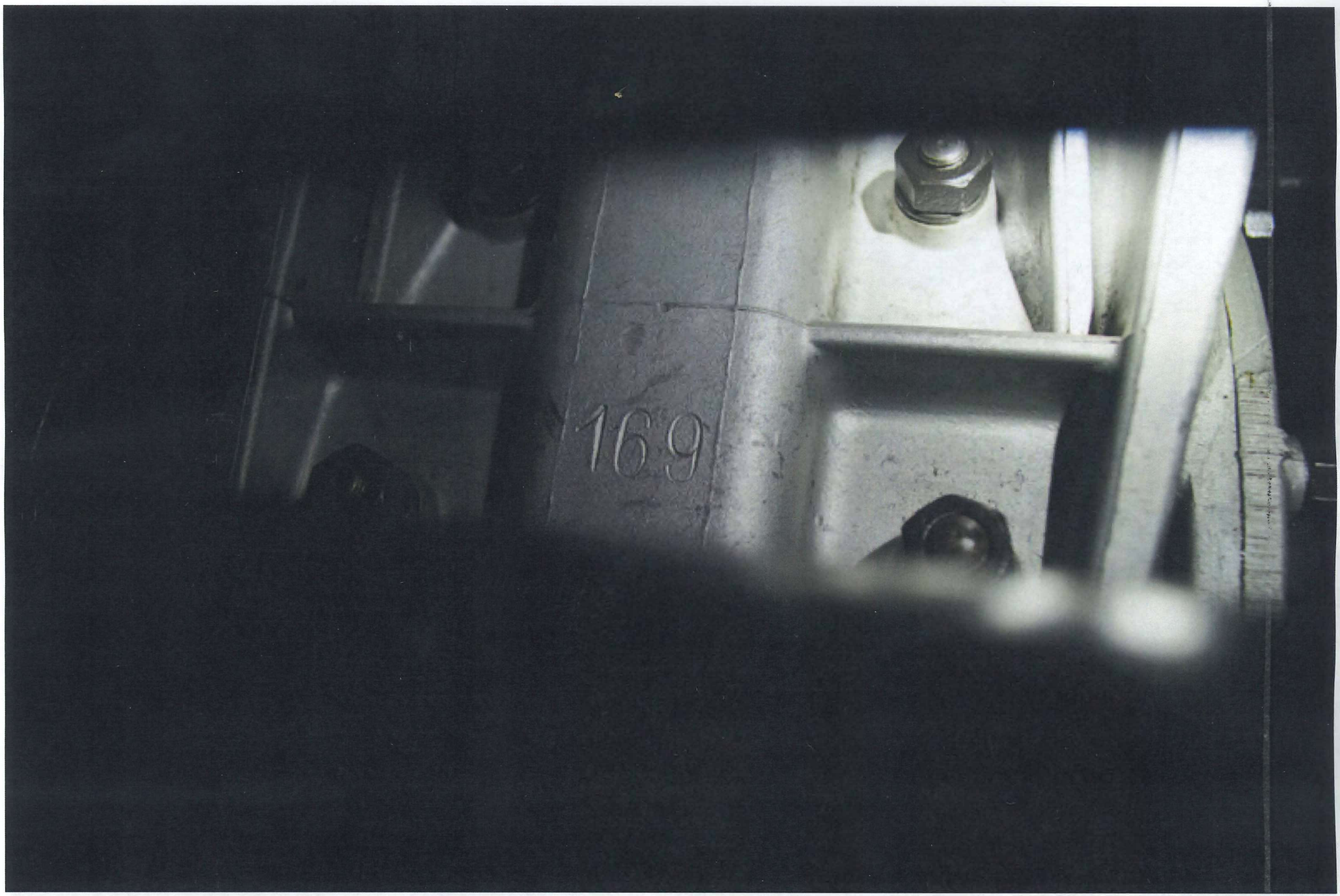
See Attached Photos

Audi Denver

2014 Colorado Concours Judging Results

	Registration Number	Year	Make	Model	Color	Comments
BEST OF SHOW CONCOURS D'ELECANCE	**1503**	**1955**	**Lancia**	**Aurelia Spider**	**Grigio**	**One of 181 produced, this example was the 8th made and second oldest remaining today (the oldest being serial #1001 - the prototype). Freshly restored by owner Stephen Bell, this complete nut and bolt restoration took place in under a year and resulted in what is believed to be the most accurately restored example in existence today. Only 68 Aurelia Spiders are known to still exist.**
BEST OF SHOW CONCOURS D'SPORT		**1968**	**McLaren**	**M6B**	**McLaren Orange**	**Customer version of the M6A driven by Bruce McLaren in Can-Am.**
PEOPLE'S CHOICE	**1828**	**1976**	**Porsche**	**930 Turbo**	**Silver**	**First Turbo Carrera built for the U.S. market. 1 of 2 turbos built April/May 1975. They were used for homologation purpose in U.S. This car is number 011. There were 4 turbo preproduction cars built for the U.S.: #011, #012, #013 and #014. Only #011 and #014 are left. No options were installed. Bought in November 1978 and I am the second owner. Engine is # 21and is original and unrestored - just general maintenance. On the Cover of Road and Track. The first 930 Turbo Carrera that started the rage of Turbos in America.**
CONCOURS JUDGING CLASSES						**Judged by the Colorado Concours judging teams - Head Judge Jerry Medina.**
NOVICE						
1st Place	505	1967	Chevrolet	Corvette	Marboro Maroon	Original numbers matching motor, transmission, and rear. Options include 427CI / 390HP motor, power steering, power brakes, four speed close ratio transmission, tinted windows, AM/FM radio, positraction rear, off road exhaust, white side wall tires. The vehicle was first owned by Glenda Charkay, a professor at CSU who owned the car for 30 years. She purchased the car from Vern Hagested Motor in Denver for $3,768.90. The vehicle was repainted in 1994. We are the third owners of this 356 T-6 Normal Coupe.
2nd Place	1909	1962	Porsche	356 -T6 Normal Coupe	Ruby Red	
POST WAR THROUGH 1960						

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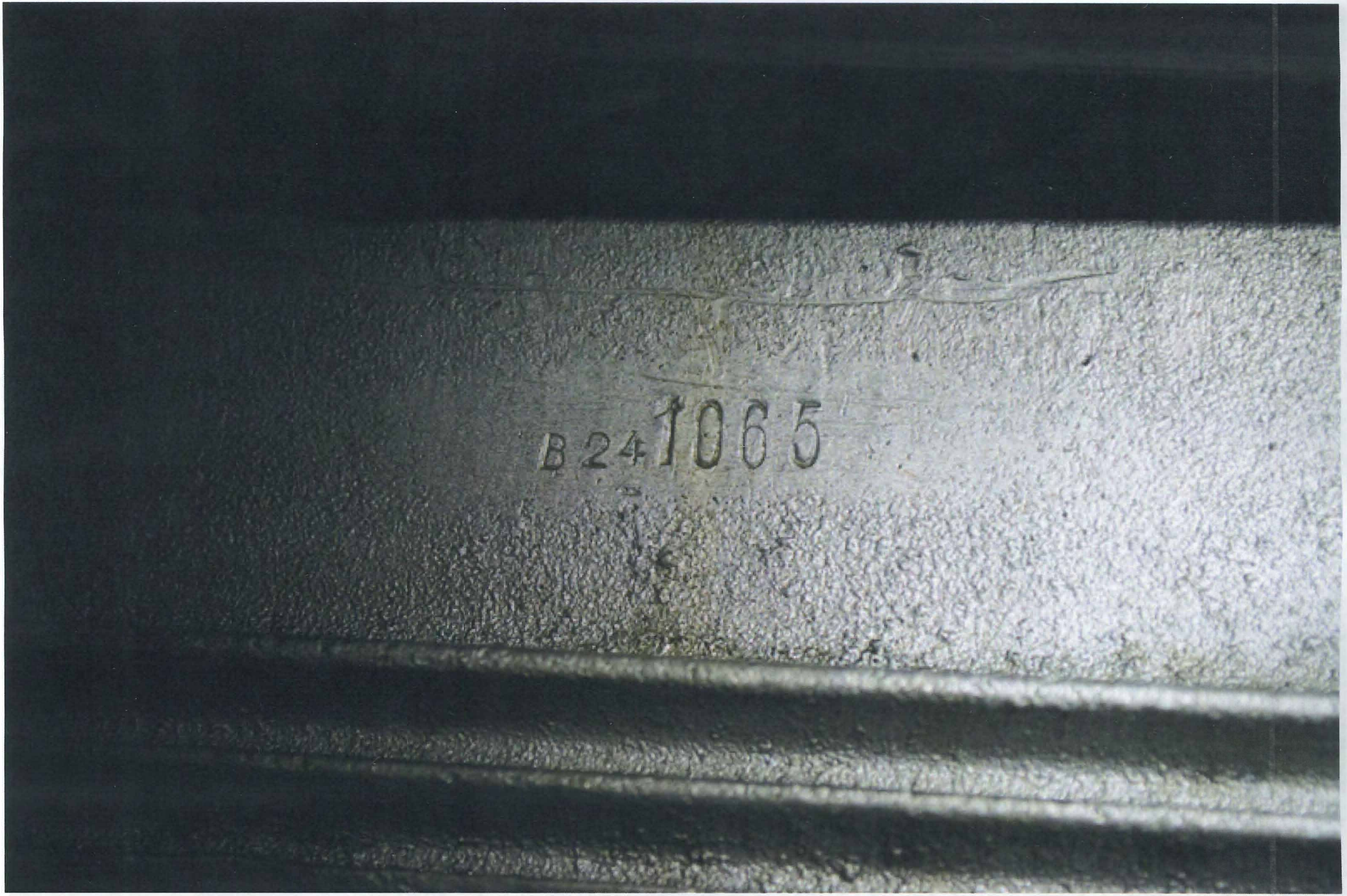
LANCIA & C. TORINO S.p.A.
TIPO
B24 S
11
N°


B 24 1065


B24 R 1065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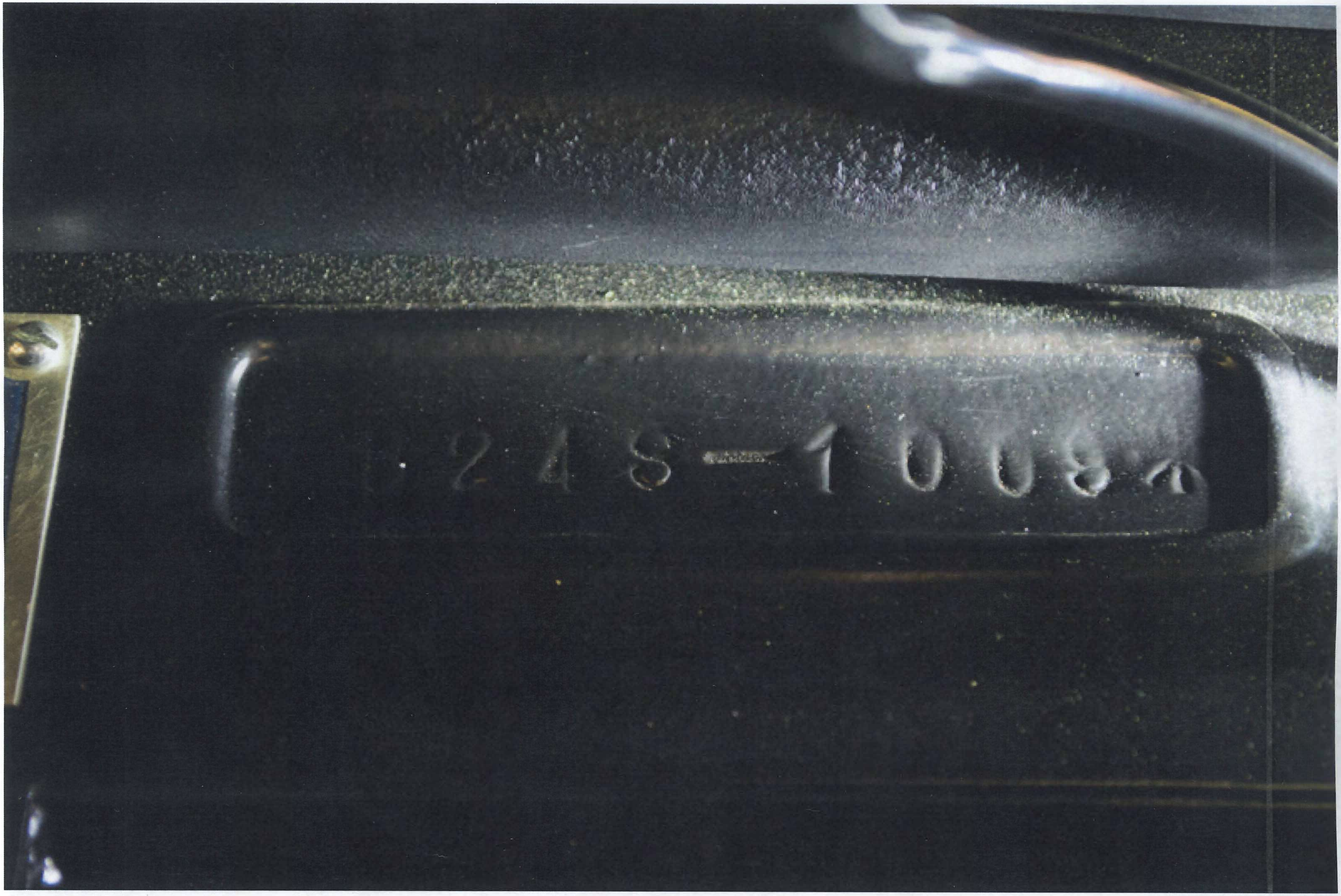
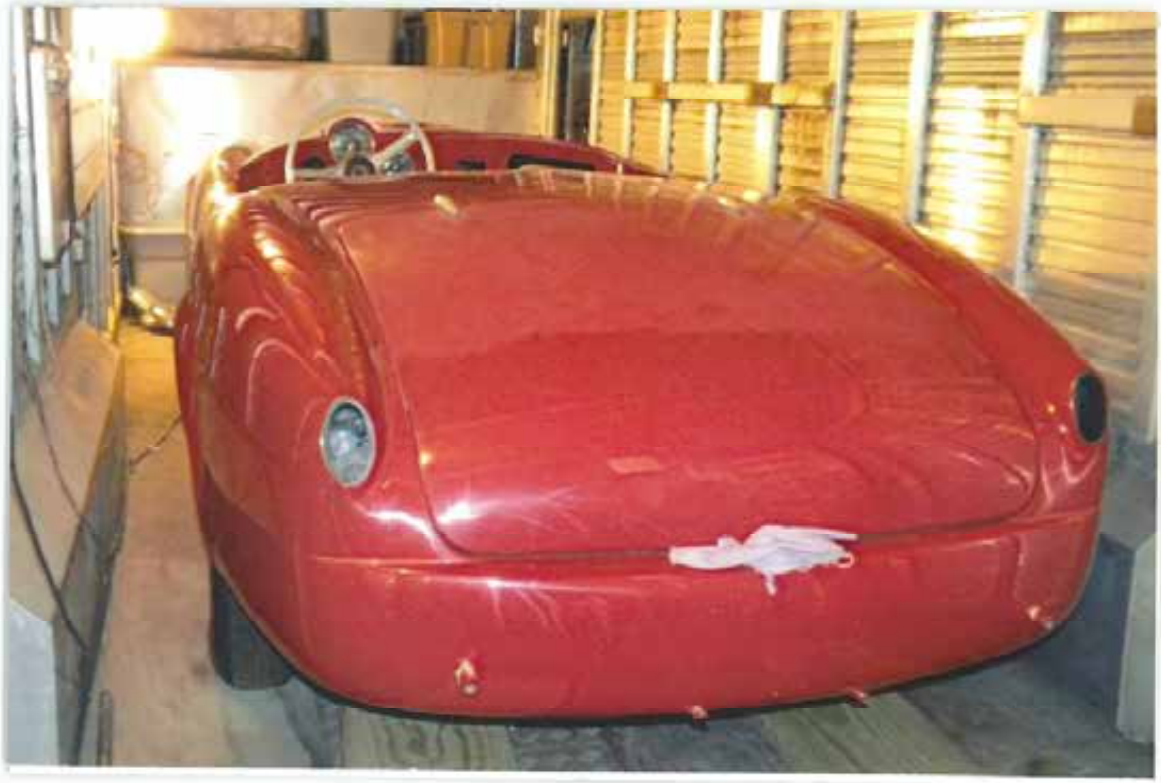
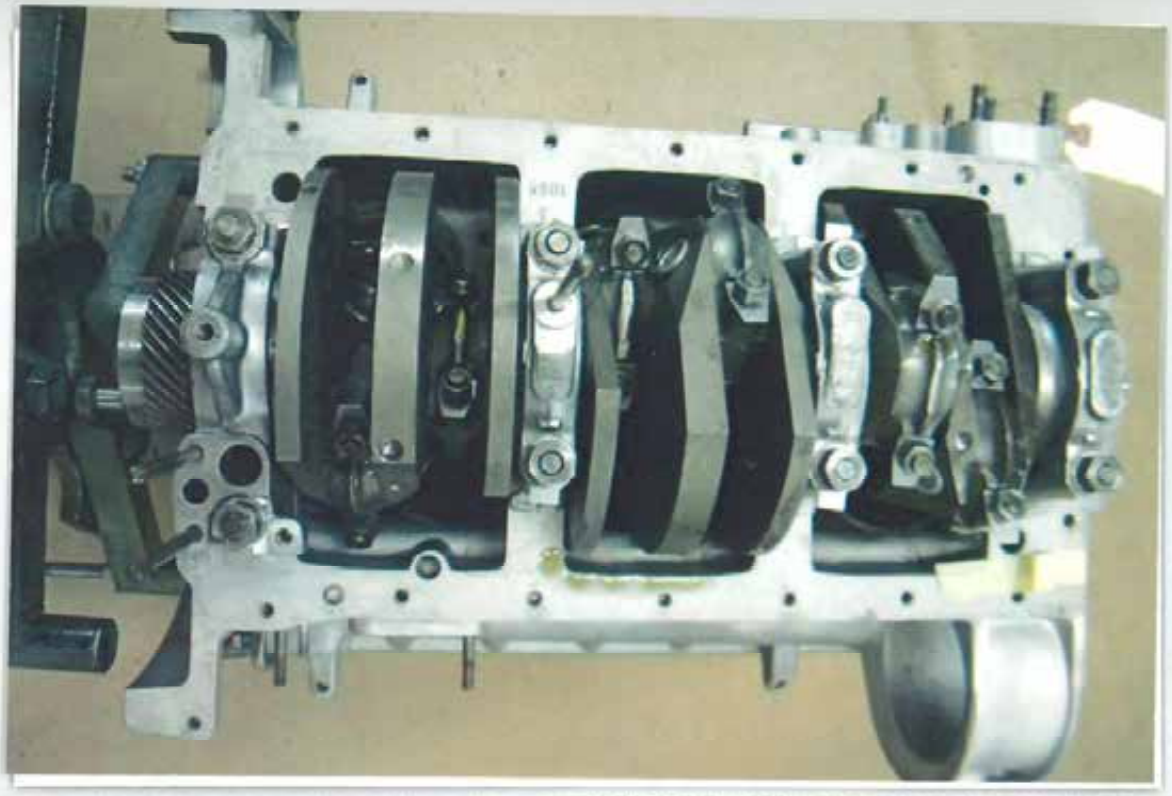
LANCIA
LANCIA & C.
Fabb Automobili - Torino-S.A.
VETTURA TIPO AURELIA
N° B24S 1009




MOT. B24 № ☆ 1065 ☆




LANCIA

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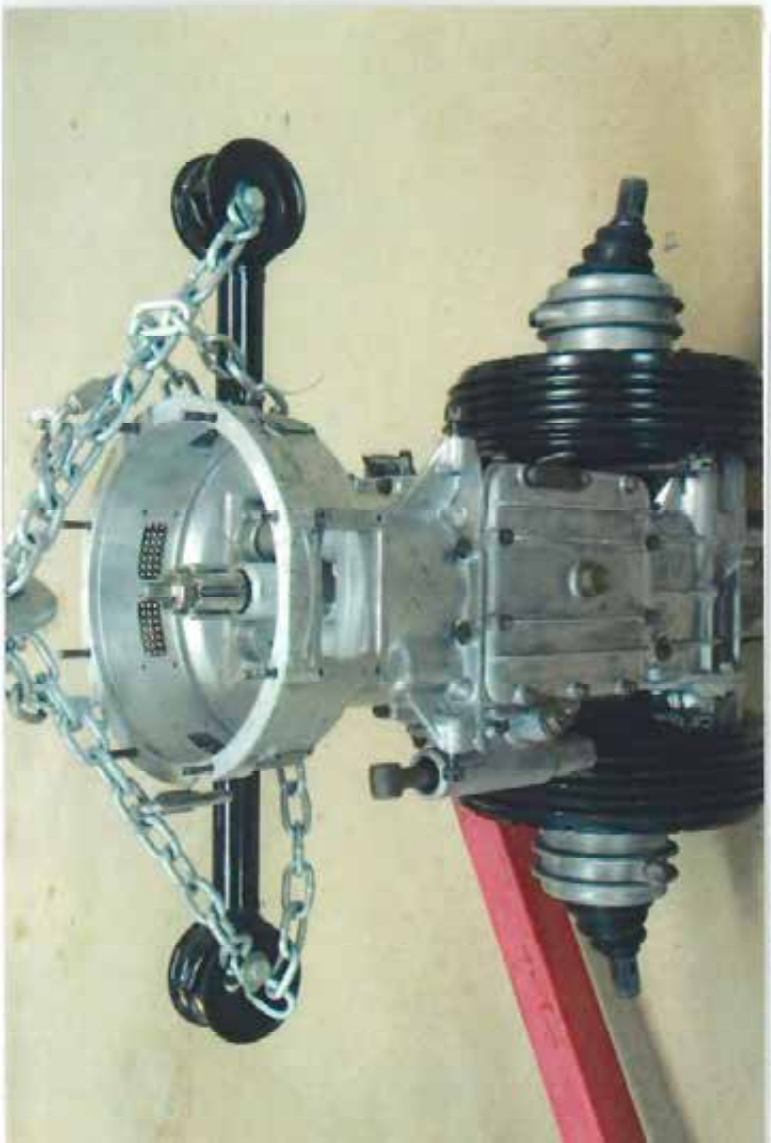
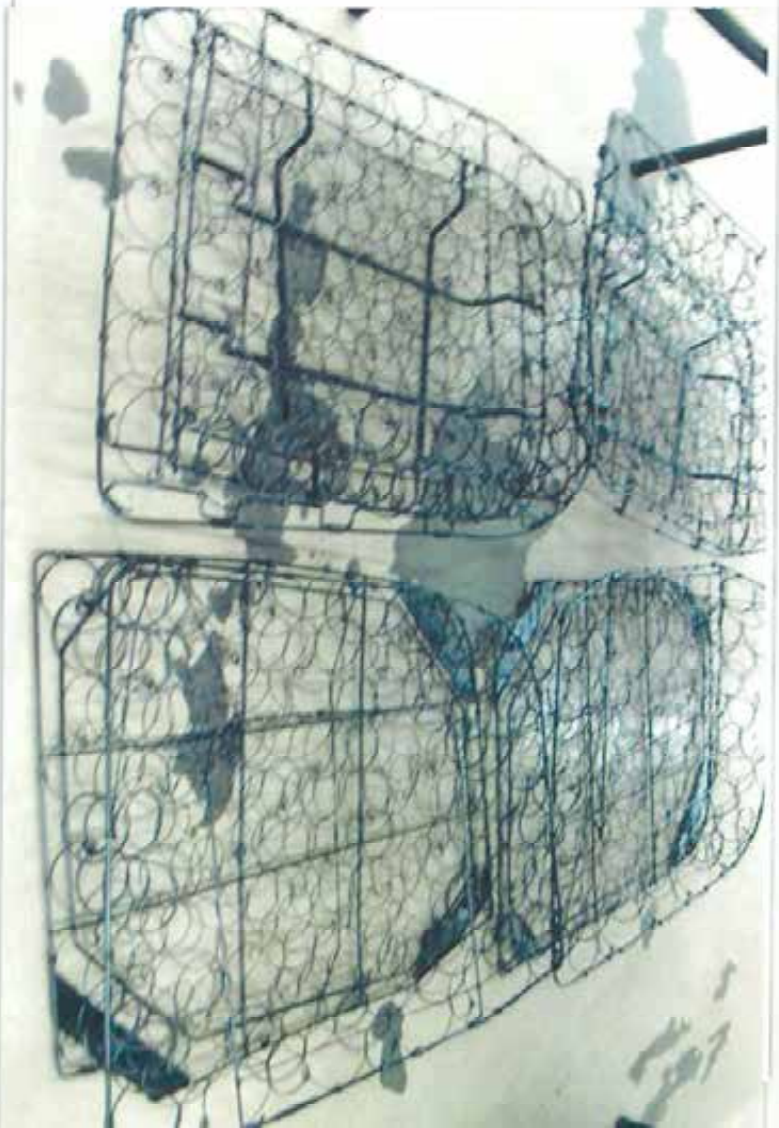



Maxoloid
TINTE ORIGINALI
CONVERTIBILE G.T. 2500
COLORIFICIO ITALIANO MAX ME




Concours
Class

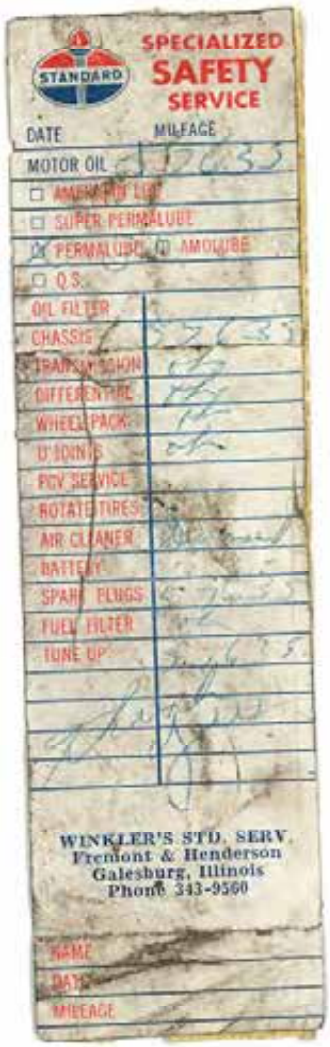
C

Do NOT push car by d on b y or bumpers!

Only use hand-on-tires to roll ca (minimum 2-person operation).

Starting Procedure

1. ***Insert Key***
2. ***Turn Key Clockwise to 6 o'clock***
3. ***Pump Accelerator 5-6 times***
4. ***Depress Key to Engage Starter***



STANDARD

SPECIALIZED
SAFETY
SERVICE

DATE MILEAGE

MOTOR OIL

☐ AMERICAN LUBE

☐ SUPER PERMALUBE

☒ PERMALUBE ☐ AMOURE

☐ O.S.

OIL FILTER

CHASSIS

TRANSMISSION

DIFFERENTIAL

WHEEL PACK

U JOINTS

PCV SERVICE

ROTATE TIRES

AIR CLEANER

BATTERY

SPARK PLUGS

FUEL FILTER

TUNE UP

WINKLER'S STD. SERV.
Fremont & Henderson
Galesburg, Illinois
Phone 343-9560

NAME

DATE

MILEAGE

APERTURA DELLA VETTURA

— aprire i bottoni di sicurezza che fissano le parti laterali della capote
— aprire i 3 ganci che fissano la traversa anteriore della capote alla cornice superiore del parabrezza
— ribaltare in avanti gli schienali dei sedili
— liberare la tela copri-capote dagli appositi bottoni di sicurezza
— sollevare la traversa della capote (foto 1) e lasciarla scendere nella posizione indicata nella foto 2
— tirare all'indietro l'armatura della capote agendo come nella foto 2; i due ganci di sostegno dell'armatura si libereranno automaticamente e la capote scenderà da sola nella sua sede. Nel caso in cui i due ganci non si liberassero automaticamente, essi possono essere sganciati facilmente uno alla volta agendo sui rispettivi ganci di arresto, come indicato nella foto 3
— liberare la traversa posteriore dagli appositi quattro ganci facendo scorrere la traversa stessa all'indietro (foto 4) e sistemarla nell'interno dietro gli schienali (foto 5)
— estrarre completamente la tela copri-capote (foto 5) e ribaltarla fissandola alla scocca con gli appositi bottoni di chiusura (foto 6)
— riportare gli schienali dei sedili nella posizione normale

FOTO N. 1

FOTO N. 2

FOTO N. 3

FOTO N. 4

FOTO N. 5

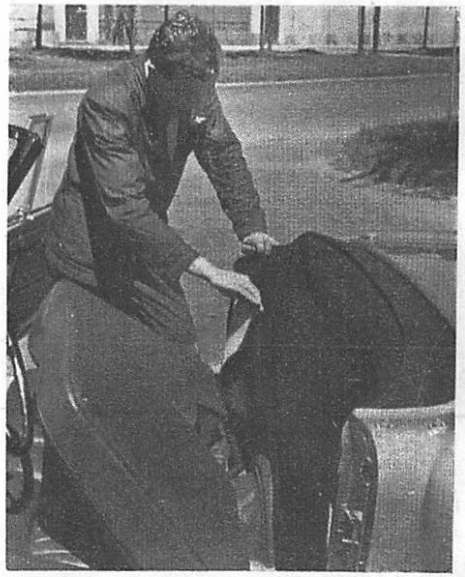


FOTO N. 6

CHIUSURA DELLA VETTURA

— ribaltare in avanti gli schienali dei sedili e liberare la tela copri-capote dagli appositi bottoni di chiusura (foto 1)

— estrarre l'arco posteriore della capote e infilarlo negli appositi ganci esistenti sulla scocca spingendo in avanti, avendo cura che la traversa venga sistemata in **tutti e quattro** i ganci (foto 2)

— sollevare l'armatura della capote in avanti verso l'alto (foto 3) fino ad agganciare l'armatura stessa negli appositi arresti di sicurezza (foto 4)

— chiudere i bottoni di sicurezza laterali della capote (foto 5)

— agganciare la traversa anteriore della capote alla traversa superiore del parabrezza a mezzo degli appositi tre ganci

— fissare il copri-capote a mezzo degli appositi bottoni di sicurezza

— riportare gli schienali dei sedili nella loro posizione normale

FOTO N. 1

FOTO N. 2

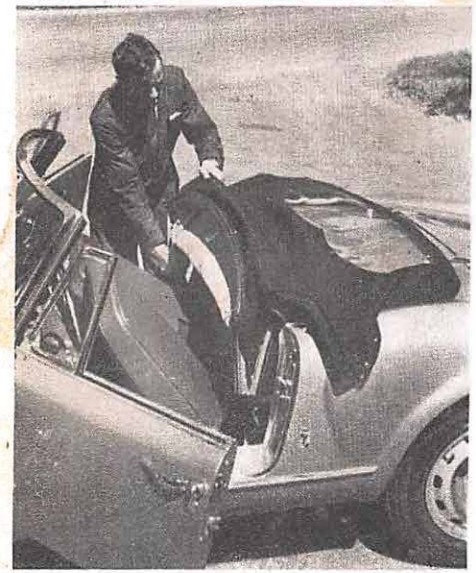


FOTO N. 3

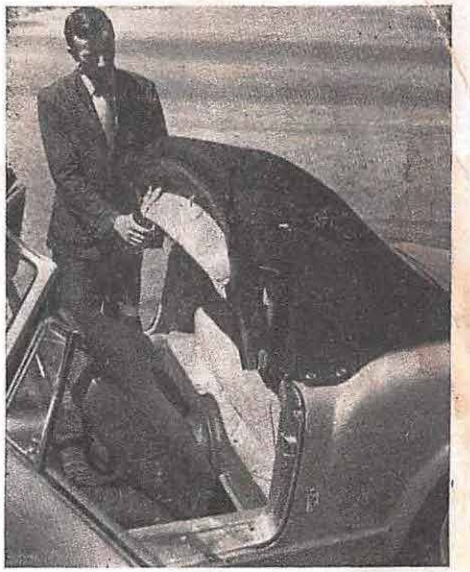


FOTO N. 4

FOTO N. 5

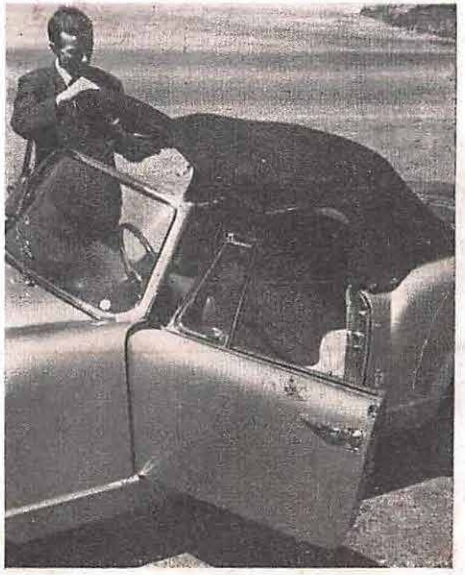


FOTO N. 6

AVRELIA

G. T. 2500

Coupé and Convertible Models

(Starting from cars Nos. B 20-3817, B 20 S-1436, B 24 S-1332)

INSTRUCTION BOOK

(For illustrations, see Italian edition)

Printed in Italy

Data and characteristics appearing in this Instruction Book may be varied by the Firm without any notice being released.

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FOREWORD

The specifications, general data, charts and instructions deemed necessary for the regular maintenance and to ensure a satisfactory performance of the car, are contained herein.

This is not meant to be a complete description of the various units, nor a detailed explanation of their operation; the owner will find herein what he normally needs to know in order to make an intelligent use of the possibilities of the car, thus avoiding damaging the units.

The operating and maintenance instructions cover the average requirements of the owners which, of course, may change according to the particular circumstances and service performances that each user may require from his car. It is on the constant and close adherence to these instructions that depend the regular operation and life of the components, as well as low maintenance costs and petrol consumption. On the other hand, overlooking these instructions will entail the annulment of the guarantee which is granted for the product of the Company.

We have clearly shown how the adjustments and periodicals inspections must be carried out by the user servicing his own car, but for those who prefer having such operations carried out by a specialized personnel in workshops provided with the necessary equipment and facilities, we suggest to call on our Works, or on our authorized Agencies, also for all normal maintenance service.

For complete overhaul we strongly advise the owners to call only on our Repair Shops or on those of our authorized Agencies and to use only original spare parts.

INDEX

IDENTIFICATION NUMBERS OF THE CAR

Fig. 2 - Standard Coupé Model

The identification number bears the prefix B20 or B20S stamped on the center of deshboard under the bonnet.
Example: B20-3821 (R.H.D.)
B20S-1443 (L.H.D.)

Fig. 2 bis - Convertible model

The identification number bears the prefix B24S stamped on the center of dashboard under the bonnet.
Example: B24S-1343.

Fig. 2 ter - Engine

The identification number bears the prefix B20, for Coupé model, and B24 for convertible model, stamped on the right hand side of the engine body.
Examples: MOT B20 No. 4988
MOT B24 No. 1468

INSTRUMENTS AND CONTROLS

Fig. 3 - Instruments and controls (for Coupé model, R.H.D.)

1. Windscreen wiper - 2. Instrument panel lighting control - 3. Radio panel - 4. Key switch for engine ignition, starting and services - 5. Cigar lighter - 6. Outer lighting control - 7. Windscreen sprayer - 8. Petrol level indicator - 9. Mileometer - 10. Oil pressure gauge with warning light - 11. Water thermometer - 12. Driving mirror - 13. Warning light for carburettor starter device - 14. Warning light for dynamo - 15. Engine tachometer - 16. Warning light for town lights - 17. Sun-shade - 18. Ash-tray - 19. Steering wheel - 20. Change-over switch and direction indicator control - 21. Horn control - 22. Handle for window lifting - 23. Watch - 24. Bonnet control lever - 25. Gearshift lever - 26. Warning lights for R.H. and L.H. direction indicators - 27. Control lever for carburattor starting device - 28. Accelerator hand control lever - 29. Mileometer trip control (not to be set to zero while running) - 30. Air intake control lever - 31. Accelerator pedal - 32. Brake pedal - 33. Inner lighting control switch - 34. Clutch pedal - 35. Parking brake lever - 36. Switch and control for heating system fan - 37. Fog light control - 38. Knob for windscreen wiper control - 39. Control knob for heater air intake - 40. Car heater - 41. Glove compartment - 42. Ash-tray.

Fig. 3 bis - Instruments and controls (for Saloon models - L.H.D.)

1. Sun shade - 2. Petrol level indicator - 3. Mileometer - 4. Oil pressure gauge with warning light - 5. Water thermometer - 6. Driving mirror - 7. Warning light for carburattor starting device - 8. Warning light for dynamo - 9. Engine tachometer - 10. Warning lamp for side lights - 11. Windscreen sprayer - 12. Outer lighting control switch - 13. Cigar lighter - 14. Key switch for engine ignition, starting and services - 15. Radio panel - 16. Instrument panel lighting control - 17. Windscreen wiper

- 18. Ash-tray - 19. Glove locker - 20. Car heater - 21. Control knob for car heater air intake - 22. Control knob for windscreen wiper - 23. Fog light control - 24. Accelerator pedal - 25. Control switch for heater fan - 26. Hand brake lever - 27. Brake pedal - 28. Inner light control - 29. Clutch pedal - 30. Air intake control lever - 31. Watch - 32. Hand lever for accelerator control - 33. Control lever for carburettor starting device - 34. Gear shift lever - 35. Mileometer trip control (not to be set to zero while running) - 36. Bonnet opening lever - 37. Warning lights for R.H. and L.H. direction indicators - 38. Handle for glass opening - 39. Horn control - 40. Change-over switch and direction indicators control - 41. Steering wheel - 42. Ash-tray.

Fig. 4 - Instruments and controls (Convertible model)

1. Warning lights for direction indicators - 2. Petrol level indicator - 3. Mileometer - 4. Oil pressure gauge with warning light - 5. Water thermometer with warning light - 6. Warning light for carburattor starting device - 7. Engine revolution counter - 8. Warning light for dynamo - 9. Warning light for side lights - 10. Direction indicator control - 11. Driving mirror - 12. Windscreen wiper control knob - 13. Key-switch for engine ignition, starting and services - 14. Heater-fan switch knob - 15. Radio panel - 16. Heater air intake control lever - 17. Windscreen wiper - 18. Ash tray - 19. Glove locker - 20. Cigar lighter - 21. Car heater - 22. Inner lighting switch - 23. Accelerator pedal - 24. Reserve control tap - 25. Gear shift lever - 26. Hand brake lever - 27. Brake pedal - 28. Hand control accelerator lever - 29. Clutch pedal - 30. Control lever for carburattor starter device - 31. Instrument pannel lighting control - 32. Aerator control - 33. Watch - 34. Mileometer trip control (not to be set to zero while running) - 35. Bonnet opening control lever - 36. Horn control - 37. Windscreen sprayer control knob - 38. Headlight control - 39. Headlight change-over control lever.

WITH NEW CAR

FOR THE FIRST 2000 KM (1300 MILES)

Running-in

The proper use of the vehicle for the first thousands kilometers is of good assistance in the setting of all moving parts as well as to their life.

In order to perform a gradual running in, the following procedure shall be applied during such a period:

— **When starting** warm up the engine gradually and avoid bringing it to a high R.P.M. rate;

— When running on level ground, the following speeds are not to be exceeded

Covered miles	Max. speeds allowed			
	Low speed	2nd speed	3rd speed	High speed
For the first (650 miles)	25	38	50	75
Between (650 and 1300 miles) . .	30	45	60	90

— On long stretches of road release from time to time the accelerator pedal for a few seconds;

— When climbing never push full down the accelerator pedal, but rather shift to a lower gear, if necessary.

ROAD TEST: BETWEEN 2000 AND 2500 KM. (1300 AND 1600 MILES)

Maintenance

Lubricate the car throughout and replace the oil in the engine;

— clean the oil strainer body (without replacing the filtering element);

— clean the fuel pump filter;

— clean and grease the terminals of the battery;

— check the electrolyte level in the battery;

— clean inside of fuel tank so as to remove all impurities, if present;

— check for level and oil sealing the gearbox, the differential casing and the steering gear box;

— check tyres for pressure.

Inspections

Engine

Check engine suspension for locking of bolts;

— Check the engine exhaust manifold and piping for proper tightening;

— Check the tension of the fan belt and opening of shutters (thermostat);

— Check for locking the cylinder head and adjust tappets

— Check and clean the air cleaner and carburettor, adjust idle running, check the starter for proper operation and the carburettor support for locking

— Inspect the spark plugs, adjust the electrodes, sand blast and check on test bench

— Inspect the coil ignition, adjust the contact points, check on test bench and adjust ignition timing on engine.

Clutch

Check free play of clutch pedal.

Transmission and gearbox

— Check for proper tightening the screws fastening the support of the gearshift control lever and of the steering column to the instrument panel

— Check gearbox control linkage, the ring-nut retaining the lever for tightening, and gearshift mechanism for proper operation.

— Check for proper tightening the nuts of propeller shaft joint, and fastening the rubber attachment to gearbox and rear axle.

Brakes

— Check oil level of feeding tank of hydraulic brakes and check the relevant pipings for sealing.

— Check for sealing and proper operation the hydraulic brake control pump.

— Check the proper operation of parking brake.

— Carefully clean by air blast the linings and drums of front brakes.

— Adjust brakes and check free travel of brake pedal.

Steering gear and front suspension

— Check oil level of feeding tank of front suspension and check the relevant pipings for sealing.

— Check fastening of front axle to body-work.

— Check for locking the bolt fastening the lever to the drop arm, the bolt fastening the sleeve of the steering column, tie-rods, knuckle joints and silent blocks of steering gear.

Rear suspension

Check for locking the U-bolts of rear springs and attachments of shock absorbers.

Electric system and instruments

— Check the dynamo for regular charging rate of the battery.

— Check: lighting and focus of headlights, the tail lights, the inner lighting of the car, the horns, the windscreen wiper, the windscreen sprayers, the car heater.

— Check for fixing and operation the mileometer, the tacheometer, the oil pressure gauge.

Bodywork

— Check for operation and lubricate the hinges, spring latches and cremone bolts of doors.

— Check for operation locks and window lifting gears (locks are not to be lubricated by oil; use graphite instead).
— Check for fastening: bumpers, handles, number plates and trimmings.

ROAD TEST: BETWEEN 5500 AND 6000 KM. (3400 AND 3700 MILES)

Maintenance

— Lubricate the car throughout and replace the oil in the engine sump.
— Wash the oil filter body and replace the filtering element.
— Wash the petrol pump filter.
— Clean and grease the battery terminals.
— Check the electrolyte level in the battery.
— Check oil level and inspect the gearbox, the differential unit and steering gear casing for sealing.
— Check pressure of tyres.
— Replace cooling water in the radiator.

Inspections

Engine

— Check for locking the engine suspensions.
— Check for locking engine exhaust manifold and relevant pipings;
— Check tension of fan belt and opening of shutter (thermostat).
— Check for sealing the delivery pipe to oil pressure gauge.
— Adjust clearance of tappets.
— Check and clean carburettor and air cleaner, adjust idling jet.

— Check operation of starter device and fastening of support of carburettor.
— Check spark plugs, adjust electrodes, sand blast and inspect on test bench.
— Check for compression ratings.
— Check coil ignition, adjust contact points, check on test bench and adjust ignition timing of engine.

Clutch

Check free play of pedal.

Transmission and gearbox

— Check for tightening the screws fastening the support of gearshift control lever and of steering column to instrument panel.
— Check gearbox control linkage, tightening of ring-nut retaining the gearshift lever and smooth operation of gearshift mechanism.
— Check tightening of nuts fastening the propeller shaft joints and fastening the elastic attachments to gearbox and rear axle.

Brakes

— Check the oil feeding tank of hydraulic brakes for level and relevant pipings for sealing.
— Check for sealing and proper operation the hydraulic brake control pump.
— Check the parking brake for proper operation.
— Clean carefully by air blast the linings and drums of front and rear brakes, check cylinders for sealing and smooth operation.
— Adjust brakes and check free play of pedal.

Steering gear and front suspension

— Check oil feeding tank of front suspension for level and relevant pipings for sealing.

— Check fastening of front axle to bodywork.

— Check locking of bolt fastening the lever to driven steering shaft; bolt fastening the sleeve of steering column, tie-rods, knuckle joints, drag link and silentblocks of steering gear.

— Check wheels for toe-in.

Rear suspension

Check locking of U-bolts of rear springs and attachments of shock absorbers.

Electric system and instruments

— Check the dynamo for proper charging rate of battery.

— Check: lighting up and beam direction of headlights, direction indicators, tail lights, inner lighting of car, horns, windscreen wiper, windscreen sprayer and car heater.

Bodywork

— Check for fitting and operation the mileometer, the tachometer, and the oil pressure gauge.

— Check for operation and lubricate hinges, spring latches, and cremone bolts of doors.

— Check for operation locks and window lifting gears (locks are not to be lubricated by oil, use graphite dust instead).

— Check fastening of bumpers, handles, number plates and trimmings.

Before using the car

Before starting for a run, checking the following items will be necessary:

— The fuel must be sufficient for the run being performed.

— The radiator cooling water shall reach the lower level of the filling plug. For water filling, avoid calcareous water to prevent deposits that may jeopardize the satisfactory performance of the engine. Should alcohol-water anti-freeze compound be used, alcohol shall be added for topping up. If other mixtures are used, addition of water will be sufficient.

— Oil in the engine sump shall not be much lower than level marked « Max » on the dipistick, in order to avoid, while travelling, to reach the minimum level.

— The tyres must be inflated to the proper pressure, according to instructions including also the spare wheel, bearing in mind that tyres unproperly inflated decrease road holding of the car, undergo a earlier wear and decrease the braking efficiency.

— The brake tank rod, when pulled upward, shall remain in such position.

Starting the engine

— With the key on the instrument panel set in second position, the warning lamp of the dynamo must light up and the petrol level indicator must mark.

— Push the lever of the carburettor starting device, then push down the key on the instrument pannel.

— When the engine is cold, or when operating at very low temperatures,

depressing a few times the accelerator pedal might be needed.

— As soon as the engine is started, release the key and, gradually, according to the engine requirements, reset back the lever of the carburettor starting device; this lever must be reset fully back when the engine operates smoothly.

— Should the engine fail to star, repeate the whole procedure stopping a short time between two trials, thus allowing the starting motor to stop before being operated again.

— When starting a warm engine, operating the carburettor starter device becomes no longer necessary.

— When operating at very low temperatures, operate the clutch pedal to free the engine from the gearbox.

N.B. — When the engine is started and warmed up, always reset back the lever of the carburettor starting device. When the engine runs at its maximum rating, check that the pointer of the oil pressure gauge moves over the center sector of the dial.

When repeatedly starting up and using the carburettor starter device with insistence, it may occour that an excess of petrol accumulates in the inlet manifold, which may not be burned. In this intance, to facilitate starting, bring the carburettor starter device fully backward, then, while pushing the key of the starter motor, press the accelerator pedal full down, so as to enable the engine taking in a bigger amount of air and discharge the excess of petrol.

Failure to start

— The starting motor does not operate: the battery may be discharged, the connections may be faulty or a failure in the starting unit or in the circuit may have occurred.

— The ignition fails: dirty spark plugs, distributor contacts to be cleaned, faulty coil distributor connections, blow-up fuse, faulty timing of ignition.

— Petrol fails to reach the carburettor: the tank is empty or needs being set to « reserve », or feeding pump to be primed, clugged filters, piping and pump unit need being checked.

— When the engine is at rest for inspections, avoid leaving the switch key in second position, to prevent overheating the coil and unnecessary discharge of the battery.

Rough running of engine

— Repeated spitting, particularly at full throttle: the carburettor nozzles may be partially clogged, insufficient delivery of petrol owing to dirty filters or faulty pump, foreign matters in the petrol.

— Irregular firing: dirty spark plugs or incorrect gap between the points, points may need cleaning, faulty connection or insulation of coil-distributor-spark plugs.

— Smoky exhaust: mixture too rich, faulty operation of the carburettor floater, leaks at the gaskets of the carburettor nozzles.

Overheating of water in the cooling system

— Insufficient water level (minimum level allowed: the water should cover the pipes in the upper chamber of radiator).

— Belt, for control of fan and pump, slipping.

— Radiator shutters and thermostat are not operating properly.

— Water pipes and chambers are clogged.

Oil pressure in the engine

The pointer of the oil pressure gauge shows the pressure of the engine oil which, in operation, must reach the center sector of dial when the car is running at 65 km/h (40 m.p.h.) in top speed. However, this pressure value may vary owing to the quality of oil used, whether thick or fluid, or according to the operating temperature.

Economy in operation

The operating condition of the car and particularly running on upgrading roads, may be cause of unusual fuel consumption.

Furthermore, also the manner the car is driven may be important on this account. Sudden accelerations and hard braking at high speed, certainly do not provide for a low fuel consumption. Low fuel consumption is assisted by gradual encrease of speed and timely slowing-down, when stopping is foreseen.

Gear shifting

When starting the engine, the gear shift lever must be in neutral position, same as parking brake lever must be released when starting the car.

As the 2nd, 3rd, and top gear are synchromeshed, when engaging one of these gears, you only need pressing the clutch pedal, carrying out the gear shifting, by moving unhurriedly the lever, and then releasing the clutch pedal.

When shifting, however, from 2nd gear to low gear, depress the clutch pedal, disengage the gear, release the clutch pedal and throttle up the engine, depress again the clutch pedal and engage the gear, then after the engagement has been carried out, release the clutch pedal.

The speeds at which it is advisable shifting the gears depends on road conditions and on load condition of the car.

Fig. 5 - Positions of gear shift lever on the Coupé model

Fig. 6 - Positions of gear shift lever on the Convertible model

Bearing in mind the foregoing, the maximum speeds — which should never be exceeded — for each gear, are as follows:

30 mph in low gear
50 mph in 2nd gear
75 mph in 3rd gear

Downhill running

When the engine is used as a brake on long slopes, the ignition shall not be cut-off, as the small amount of petrol that the carburettor allows into the engine would remain unburnt and might damage the parts, stop in the exhaust pipings and then become ignited, thus causing serious damages.

Clutch pedal

Avoid keeping the foot constantly on the clutch pedal, as the least pressure might cause the clutch to slip with ensuing unnecessary wear to the thrust bearing of the clutch plate.

Stopping the engine

Turn off the ignition by moving leftward the switch key. When the engine stops, set the gear shift lever to neutral position and, should the car be parked, apply the parking brake.

Engine bonnet

Locking from inside the car by means of a lever located on the left hand side under the instrument pannel. When unlocked, the bonnet is slightly open, and complete opening is only possible by releasing a front latch — a strut rod keeps it in the lifted position and two automatic switched bulbs light up the engine compartment. To close, release the strut rod by pushing upward the bonnet, then lower and press it close.

Luggage compartment lid - Coupé model

Opening is effected by rotating the right hand lamp for lighting of the number plate, whereon the safety lock is applied, a retaining rod ensures the full open position. The rod is released by pushing upward the lid.

Lighting up of the luggage compartment is provided by the number plate light.

Luggage compartment lid - Convertible model

Opening is performed from inside the car by a lever placed behind the driver's seat, provided whith lock; a strut bar ensures the full open position and is released for closing by pushing upward the lid.

Air conditioning inside the car

The car is provided with aerator and heater devices, by the use of which the most comfortable temperature and aeration desired may be obtained. A front air intake, with opening and closing means controlled by a knob placed on the instrument pannel, takes the air in suitably cleaned to the conditioning ducts, wherefrom it may be delivered inside the car either heated or not.

The heating device is placed under the instrument pannel and uses, for heating purpose, the engine water (see position of tap, fig. 7); it is fitted with fan operated by a switch on the instrument pannel.

The air flows into the car through slots in the upper frame of the instrument pannel with the purpose of demisting and defrosting the windscreen, and through the heater lids when open.

Fig. 7 - Heater tap

A = Closed - B = Open.

An air intake aerator, controlled by a lever placed under the instrument pannel on the driver hand side intakes only fresh air.

The conditions which may be brought about are the following:

— **No air intake:** the air intakes are closed

(the knob has not been pulled - the lever not operated).

— **Cool air:** heater tap in closed position; open front air intake (the knob is pulled out), the aerator lever is operated and so is the fan, if more air circulation is desired.

— **Warm air:** heater tap in open position; the front air intake is open, as well as the fan is being operated, if more air circulation is desired. Check that the lever controlling the aerator, placed under the instrument pannel, is set on its closed position.

The fan does not operate when the knob is turned fully leftward. By turning the knob to the right, first the fan is operated at full speed, then the speed is decreased by turning the knob further rightward.

Should the window glass be steamed up inside the car, slightly open the swinging windows for demisting.

Change-over switch for headlights - Coupé model

By the lever on the steering wheel (same lever as for direction indicators control). When pulled backward, the lever returns with blinking light; when set forward, the lever is kept in position providing antidazzle lighting.

Change-over switch for headlights - Convertible model

By the lever on the instrument pannel. When pushed downward, the lever returns to the original position with blinking light; when moved upward, the lever is kept in position giving antidazzle lighting.

Windscreen sprayer

This unit is operated by pulling the knob on the instrument pannel which, when released, returns spraying two jets of fluid under the windscreen wipers. The fluid in the tank located under the bonnet may be either water or a detergent solution unaffecting the paint or the rubber, as 1 to 2 percent Trico Windscreen Washer Solvent. (Containt of tank: for Coupé model, about 2 litres, for Convertible model, about 1 litre).

Fig. 8 - Switch control for change-over lights and direction indicators - Coupé model

A = Antidazzle light - L = Antidazzle blinking light - D = Control of right hand direction indicator - S = Control of left hand direction indicator.

Cigar lighter

Placed on the side of the instrument pannel: when pushing-in the center section, it holds in such position until the cigar lighter is ready for use. When the center section returns to its original position, remove the cigal lighter from its seat, use and replace it. The warning lamp is a 12V-2.5W bulb.

ENGINE

	Type	60° six-cylinder, V-type
	Bore	78 mm
	Stroke	85.5 mm
	Total capacity	2451 c.c.
	Compression ratio	ab. 8,4
	Nominal power	26 H.P.
	Effective power at 5000 rpm)	112 H.P. (118 HP SAE)
	Max. rating	5300 rpm
	Max torque at 3500 rpm	126.5 lb.ft.
	Mean horsepower at max. rating	85.5 HP
	Dry weight	353 lbs
Cylinder head	Aluminium, with built-in cast iron valve seats.	
Cylinder body	Aluminium, with pressed-in cast iron liners.	
Crankshaft	On four aluminium main bearings.	
Connecting rods	Steel, with bronze piston pin bushings	
Pistons	Aluminium, with three compression rings and one oilscraper ring.	

TIMING

Camshaft	— In crankcase, chain driven, with automatic hydraulic stretcher.
Valves	— O.H., inclined, pushrod and rocker controlled.
Valve timing (cold engine)	Inlet { opens 22° before T.D.C. / closes 82° after B.D.C.
	Exhaust { opens 55° before B.D.C. / closes 23° after T.D.C.
Valve clearance	Inlet: 0.25 mm (0.020 in) / Exhaust: 0.035 mm (0.014 in).

Fig. 9 - Engine - Coupé model

Timing	Cylinders Nos. 1 and 6 at T.D.C. with reference mark « 0 » on flywheel mated with mark ¼ on flywheel casing. With valve clearance 0.50 mm (0.02 in) the inlet valve of No. 1 cylinder begins opening 3° before T.D.C., i.e., when the tooth preceeding that marked « 0 » mating mark ¼ as above mentioned.

FUEL FEEDING

Fuel tank	Coupé model.
	At rear. Filling plug located in the luggage compartment; bottom drain plug with petrol suction filter.
	Convertible model
	Behind the seats back, filling plug with safety lid, on right hand of car, bottom drain plugs with petrol suction filters.
Reserve tap	— Located on the floor, near the left hand seat. Two positions are provided for the tap:
	— lever turned leftward: reserve is off.
	Lever turned toward the direction of car: reserve in. After filling the tank, turn the tap lever to « off » position. Turn the lever to the « in » position before the normal amount of fuel is exhausted.
Level indicator	Electric, on instrument pannel. Operating when the key is set either in first or second position.

Fig. 10 - Engine - Convertible model

Fuel delivery	By mechanical operated pump located on the right hand of engine.
Fuel filters	Located in the tank, in the delivery pump, at inlet end of carburettor.
Carburettor	Weber 40 DCL 5, twin-body
Diffusers	25 mm
Main jets	1.35
Idle running jets	0.55
Air brake	1.60
Pump jet	1.65

Fig. 11 - Position of jets and carburettor controls

1. Idle running jet (to the opposite side the jet for the left hand cylinders - 2. Adiusting screw for starting device jet (I = winter; E = summer) - 3. Main jet (jet of left bank cylinders on the opposite side) - 4. Adjusting screw for idle running - 5. Throttle adjusting screw - 6. Throttle opening control lever - 7. Control for starting device.

Controls	— Accelerator: foot-pedal located on the right hand of the brake pedal, hand lever under the instrument pannel.
	— Carburettor starting device: lever located on the side of the accelerator lever, warning light on instrument pannel.
Air silencer filters	on top of carburettor.

Fig. 12 - Fuel feeding chart - Coupé model

1. Membrane type mechanical pump with fuel filter - 2. Carburettor - 3. Air cleaners - 4. Control lever for carburettor starting device - 5. Fuel level indicator (in the mileometer) - 6. Fuel tank - 7. Fuel level indicator control - 8. Fuel filling plug - 9. Accelerator hand control lever - 10. « Reserve » tap - 11. Accelerator control pedal.

Fig. 12 bis - Fuel feeding chart - Convertible model

1. Membrane, mechanical pump with bowl type filter - 2. Carburettor - 3. Air cleaners - 4. Accelerator hand control lever - 5. Carburettor starting device control lever - 6. Fuel filling plug - 7. Fuel level indicator control - 8. Fuel tank - 9. Oil pressure gauge and fuel level indicator - 10. « Reserve » tap - 11. Accelerator control pedal.

Adjusting the idle running	Slacken the adjusting screw for throttles opening until they are fully closed, then screw down by about a half turn. Loosen the two screws for idle running adjustment and, with engine warm, screw them down gradually until the engine operates smoothly without spitting and smoky exhaust (right hand exhaust for right hand cylinders, and vice-versa).

IGNITION

Type	— Coil type, Marelli B 200 A, and ignition distributor Marelli S 53 C (clockwise rotation, as seen from above).
Switch	— Key in the instrument pannel in second position (vertical).

Fig. 13 - Cylinder order number and valve position
(A = inlet - S = Exhaust).

Spark plugs	AC 45 XL — Champion NA 8.
Plug diameter and pitch	14 × 1,25.
Gap between spark plug points	0.5 to 0.6 mm (0.020 to 0.024 in).
Firing order	1 - 4 - 3 - 6 - 5 - 2.
Fixed advance	12°.
	± 5° for particular requirements.

Automatic advance	22° over the fixed advance.
Gap of contact points	0.42 to 0.48 mm (0.016 to 0.019 in)
Ignition timing	The fixed advance of 13° to 14° is obtained when, with mark « 0 » on the flywheel mated to mark A/A on the flywheel casing and valves of cylinder No. 1 closed, the contact breaker points begin to open and the distributor arm is opposite the the contact of the spark plug lead connected to No. 1 cylinder. In the above mentioned check up, the screw fastening the distributor to the engine must be at the center of the slot of the retaining collar. This advance position, established for the use of prescribed fuel, may be modified by plus or minus 5 deg. by moving leftward or rightward the collar fastening the distributor, if the advance angle needs being encreased or decreased (see fig. 14). When using petrols of lower grade, the advance setting must be decreased to avoid knocking; when, on the contrary, richer fuel is used, increase the advance setting to obtain the highest power output. The advance setting must be, however, the maximum allowed with the engine free of knocking.

Fig. 14 - Adjusting the fixed advance

LUBRICATION

System	Pressure, gear pump type, with pressure limiting valve.
Oil filling	Filling plug on cylinder heads.
Level indicator	Dipstick on right hand side of engine.
Oil pressure gauge	Located in the mileometer dial, with insufficient pressure warning light.
Oil drain	Plug placed under the engine sump.
Oil strainer	Carello, FRAM type, placed on the left hand side of engine.

COOLING SYSTEM

Type	Centrifugal pump, with radiator and fan.
Fan	350 mm dia. (14''), operated by adjustable V-belt also driving the dynamo.
Water pump	Co-axial with the fan.
Lubrication	Single pressure greaser for fan and water pump.
Temperature control	Water thermometer fitted in the mileometer dial, one thermostat on water piping, one for control of radiator shutter.
Water filling	Filling cap located under the bonnet.
Water drainage	Tap placed on right hand side of engine.

STARTING SYSTEM

Type	Marelli MT 32 A - 0,8/12 D9 electric motor.
Control	by key switch.
Gear ratio	9/121.