FIAT

SAFE MOTORING HINTS

17th EDITION

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A copy of this booklet is supplied with every car

IMPORTANT

This in an integral translation of the Italian edition. Therefore, all references to traffic regulations, road signs, etc., and illustrations, apply to Italy.

— **Printed in Italy** —

FIAT

SAFE MOTORING HINTS

This booklet *is not intended as a repetition of the Instruction Book accompanying every new FIAT car, with which you are certainly well acquainted, since the first requirement for good driving is to have a complete and sure knowledge of the car you are using. The Instruction Book provides information on the characteristics and performance of the automobile, and the ways to keep it in good running order. Above all it is an absolutely indispensable guide to the position of the controls, instruments, accessories and fillers.*

This booklet *is certainly not intended as a Highway Code, nor does it expect, by itself, to make an expert of the new motorist. Its only aim is to remind the novice and experienced drivers as well, of those elementary rules of " motoring etiquette " we all know, but which need refreshing from time to time.*

This Booklet takes up little space either in the glove compartment or the door pocket of your car. It completes the Instruction Book.

Keep it handy! It will prove useful.

MOTORING ETIQUETTE

P rinciple number one: remember that a medium-sized, fully laden automobile weighs approximately one ton. At only 30 miles (50 km) per hour, such a car generates more than enough energy to raise itself to the height of a three-story building if brought to a sudden stop. Moreover, this energy increases proportionally to the square of car velocity (when speed is doubled, the energy is quadrupled).

R emember that on a curve, this weight, made up of many parts including the human element, tends to proceed in a straight line, opposed only by the grip of tires, which is greatly reduced on gravelled, wet or icy surfaces.

U se of the horn and lights is not an insurance policy against accidents. Abuse of these warning signals will only earn uncomplimentary remarks for the « road hog ».

D uring braking operation the stopping distance varies with the square of car road speed, even though driver's reaction time remains constant.

E very nervous gesture while driving is superfluous. Getting angry with other motorists will not enhance your driving ability. Nor is it wise to try to " beat the other fellow ". The highway is not a racetrack.

N ever forget the road is divided into two equal parts. Stay in your OWN half except when absolutely unavoidable but never keep to the wrong side of the road on a curve, a hill or at intersections.

C ompetent drivers keep in mind that overtaking involves much more than just passing the actual length of the other vehicle. For example, in overtaking a bus travelling at 43 ½ m.p.h. (70 km/h), if your speed is 50 m.p.h. (80 km/h), the distance to cover will be ten times longer than the actual bus length.

E xcellent maxim for motorists: there is no rule covering all unexpected situations. The only valid course of action is to create a margin of safety in which to move.

A L W A Y S

P R U D E N C E

A ny time a motorist signals he wishes to pass you, give way to him. This is not a challenge to a race, nor should it be considered a personal insult if the car is of a class inferior to your own.

L est anyone think you uneducated, always show your best highway manners. Apply the Golden Rule and " Do unto others as you would have them do unto you ".

W indshields require constant cleaning (chamois is preferable). The slightest diminution in visibility can be costly.

A lways be ready to meet emergencies without depending on the ability and correct driving habits of other motorists.

Y ou will find that good driving habits are no more fatiguing than bad driving habits.

S erious attention to your driving will earn the praise of all those who by preference, will ride in your car.

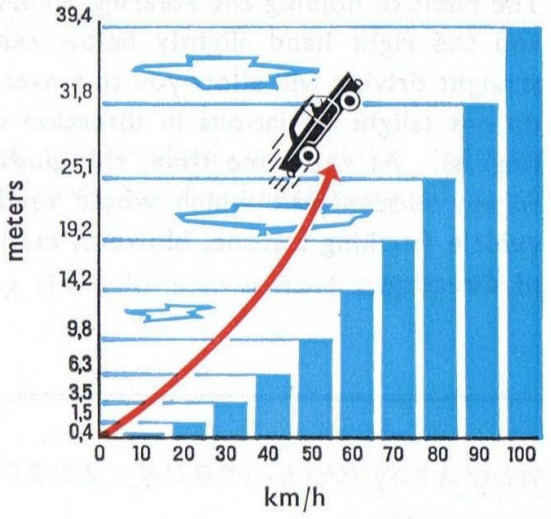


Diagram showing heights to which a car could leap if brought to a sudden stop.

CORRECT DRIVING HABITS

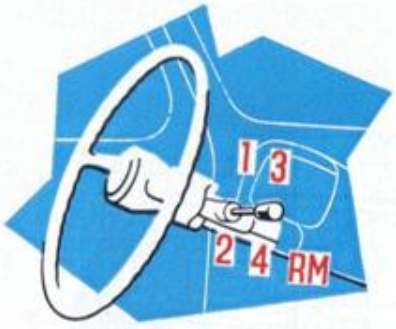
HANDS ON STEERING WHEEL

- It is good practice to drive in a relaxed fashion without struggling with the vehicle, but letting it " drive itself ". Don't clutch the steering wheel; hold it firmly but without stiffness to avoid nervous strain and unnecessary fatigue. In this way, you can concentrate exclusively on the unexpected whims of traffic.

- The habit of holding the steering wheel with the left hand slightly above and the right hand slightly below center (rule of 10 to 4 o'clock) in straight driving will allow you to travel without effort under normal conditions (slight deviations in direction can easily be corrected with two fingers). At the same time, this position will permit prompt reaction to any sudden jerk which would tend to alter the equilibrium of the vehicle (striking a stone, blowout, etc.), calling for an immediate change of direction.

ALWAYS USE YOUR BEST MOTORING MANNERS

SHIFTING GEARS



▶ There is no more revealing test to distinguish the " so-so " driver from the skilled motorist than to observe his way of changing gears, or better still, his degree of coordination in maneuvering gearshift lever, clutch and accelerator pedals (taking into consideration car performance and road conditions).

Since this is a somewhat personal matter, it suffices to say that a correct and regular driving style is the best guarantee of motoring safety and satisfaction (moral, material and... financial): the goals of every motorist.

▶ Without repeating the classic rules for shifting gears contained in every driving manual for beginners, the following two points are worth mentioning:

1) with the present system of synchronized gear shifts, " double declutching " is normally used only for the unsynchronized gears;

2) before reversing, always bring the vehicle to a dead stop.

THE ROAD IS NEITHER A RACETRACK NOR A PRIVATE LANE

USING THE BRAKES

- Consider the brakes as a device to be used with moderation, thus saving gas and wear-and-tear of tires as well as making the ride more comfortable for your passengers.

- Test your brakes often (you will have noticed how frequently railroad personnel make such checks) and remember that you must be sure you can count on positive, even, gradual and steady action when you really need the brakes.

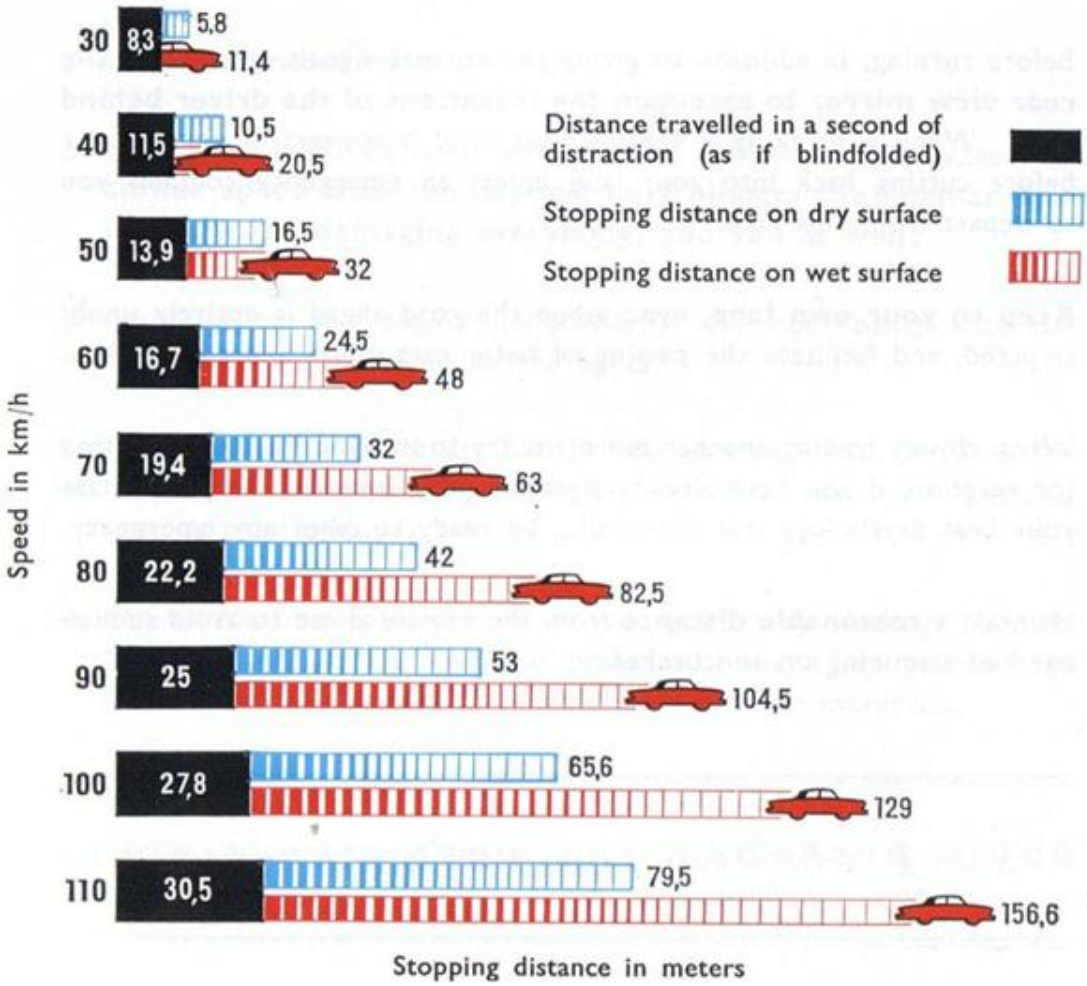
  For this reason, after a car wash, **it is a good rule to apply the foot brake several times to dry up possibly wet braking surfaces. (This should also be done after driving for hours on level roads in heavy rain).**

- Test the brakes immediately on getting behind the steering wheel of an unfamiliar car to avoid possible unpleasant surprises in an emergency.

- A final advice to the novice. After ascertaining that there is no other vehicle on the road within 300 ft (100 meters), try to brake the car hard at various speeds: 40, 50, 60 m. p. h. (60, 80, 100 km/h). You will find it a revealing experiment.

DRIVE WITHOUT STEPPING UNNECESSARILY ON CLUTCH PEDAL

Stopping distance increases proportionally to the square of car road speed. The chart given below—purely indicative—evidences the fast rate of increase in the braking distance as speed increases. Since driver's reaction time remains constant, here's how far you travel before coming to rest.



HINTS FOR DRIVING IN TRAFFIC

- On approaching highway intersections, street crossings and residential areas, drive carefully, using, in ample time and with moderation, the horn (if not forbidden) or light flashes after dusk (low beams, in town).

Remember the traffic regulations for right of way, paying particular attention to traffic signs.

- Before turning, in addition to giving the correct signals, **glance at the rear view mirror to ascertain the intentions of the driver behind you.** When overtaking a vehicle, wait until it appears in your mirror before cutting back into your lane unless an emergency compels you to depart from this rule.

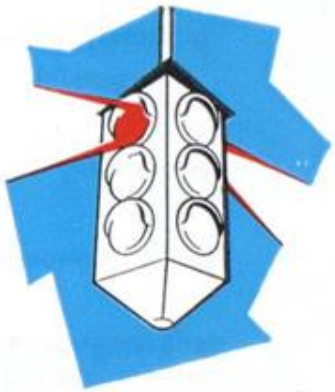
- **Keep to your own lane,** even when the road ahead is entirely unobstructed, and facilitate the passing of faster cars while being overtaken.

- When closely trailing another motorist, try to imagine his **logical** action (or reaction, if you have already signalled your intention to pass). Use your best psychology and above all... be ready to meet any emergency.

- Maintain a **reasonable distance** from the vehicle ahead to avoid sudden need of slamming on the brakes.

DON'T OVERWORK THE HORN AND FLASHES

In Town



City driving is becoming increasingly harassing due to the intensity of traffic, and because not all motorists follow the regulations scrupulously and do not show an adequate civic education. On the other hand, also the excessive **noise level** in town and excessive **air pollution** might be remedied, although partially, by using the vehicle correctly.

Contribute to improving this situation by:

- strictly observing the traffic signs;
- **trying to keep in step with traffic rhythm. A faster or slower speed than the average only hinders the normal flow of traffic, so damaging everybody, and you as well;**
- never racing the engine unnecessarily and not toying with the accelerator when waiting at the lights;
- avoiding sudden starts at full throttle and excessive accelerations in low gear and at high rpm, shifting instead to the higher gears as soon as practicable;
- not approaching intersections at full speed. By slowing down in time you will save in tire and brake wear and spare yourself unpleasantries on the part of pedestrians and other motorists;

DON'T BE HESITANT: BE WARY OF THOSE WHO HESITATE

- timely reducing throttle opening and releasing the choke as soon as possible after starting;
- avoiding to use the horn;
- not tampering with the exhaust silencer;
- giving up " sportive driving ", especially at night;
- keeping from slamming **doors** when alighting from car, especially at night.

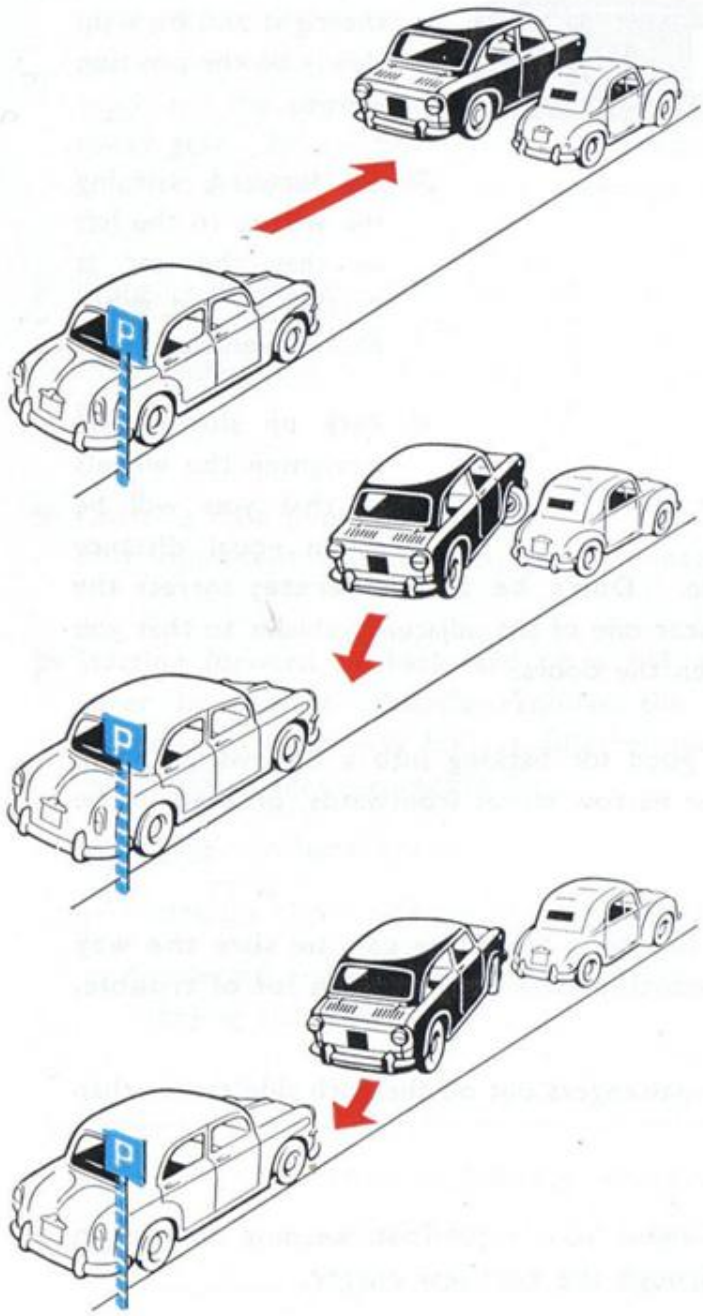
In other words: **use good manners when driving; avoid being excessively noisy and be ready to meet traffic requirements and observe the elementary principles of good behaviour, namely avoid noisiness, harmful fumes and any dangerous and exhibitionistic driving.**

DO YOU KNOW YOUR ROAD SIGNS WELL?

Parking Maneuvers

- Many drivers have difficulty in fitting their car **into a limited space** between two other parked vehicles, especially in view of the increased number of cars on the road today.

- **To park parallel to the curb:**



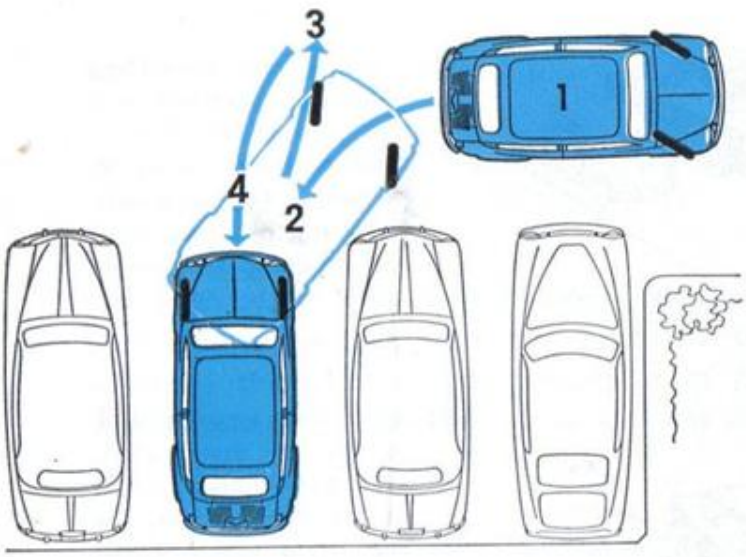
1) Draw up **not more than 1 1/2 ft (1/2 meter)** from the side of the vehicle behind which you intend to park. The main difficulty usually arises from not stopping far enough ahead of the other car.

2) Shift into reverse and, as the car starts back, turn the wheels sharply to the right so that the rear right wheel moves towards the curb.

3) Continue to back up slowly until the rear right wheel is near the curb, and turn wheels to the left thus bringing the front of car near the curb. If the maneuvers have been correct, you will be at an equal distance between the two vehicles, so as to be able to go out again without modifying steering wheel position. If too far back, move car slightly forward, at the same time straightening the wheels **so as to allow the car behind to leave without too much difficulty.**

▶ **To park perpendicular to the curb:**

1) Pass the spot where you intend to park by a distance of a little less than the length of your car, but **at no less than three feet (1 meter) in front** of the other cars.



2) Shift into reverse, turn the wheels sharply to the right and back up slowly to the position shown.

3) Go forward, turning the wheels to the left so that the car is parallel to the other parked vehicles.

4) Back up slowly, and straighten the wheels so that you will be at an equal distance from the cars on either side. **Don't be inconsiderate;** correct the position of your car if too near one of the adjacent vehicles so that you (and your neighbor) can open the doors.

This same maneuver holds good for backing into a driveway. Naturally, to enter a driveway or narrow street frontwards, proceed in the exact opposite fashion.

▶ **Before opening the door to alight from the car, be sure the way is clear. It is a little precaution that may avoid a lot of trouble.**

▶ Make a habit of letting your passengers out on the curb side rather than the street side.

▶ Finally, when starting out, signal your intentions, keeping an eye on the situation behind you through the rearview mirror.

Mountain Driving

- A common error is to shift too late from a high gear to a lower one, especially in direct drive when the vehicle slows up too much and the engine almost stops, making it difficult to pick up from a lower gear. Before starting up a steep slope, shift into the proper gear; to avoid a sudden slowing down, make the gear change rapidly.

- If engine is overheated after a long climb do not stop the engine immediately: let it **idle for a short time** in order to prevent cooling water from boiling and the fuel supply from being cut off due to excessive heating.

- Coasting on a long descent in neutral with the clutch disengaged is not only imprudent but might call for an unnecessary strain on the brakes.

- Starting forward or backward on a hill merits special mention (the latter in case an obstacle requires the motorist to back up, for example, to make way for a public transport vehicle). In such cases, the recommended procedure is:

  — Engage the hand brake.

  — Disengage clutch and put the car into first gear (or reverse).

  — Accelerate and release the hand brake, at the same time gradually engaging the clutch.

DON'T DRIVE WHEN TIRED,
BETTER STOP AND REST

- For greater safety, when the car is parked engage the hand brake and shift into first or reverse (depending on whether you are parking on an upgrade or a downgrade). As an additional precaution, park in such a way that, if the car starts to roll, the wheels will automatically move against the curb. Avoid the habit of using a stone, as a chock: if abandoned on the road when you leave it might damage other vehicles.

- Do not drive when wearing ski or climbing boots because their excessive bulkiness might fetter or delay foot action on the pedals.

- Remember, in particular, that the rule of **keeping to your own lane is doubly applicable in mountain driving,** in view of the narrowness of the road and the natural difficulties of the terrain.

- On curves, use the horn or flashes and be prudent, especially on downgrades where the force of gravity contributes to increase your speed.

- Remember this fundamental rule of courtesy: descenders should in every way facilitate ascenders.

- Last, keep an eye out for road signals indicating danger and right of way.

NEVER LOSE YOUR TEMPER

On the Road

There is little to add to the preceding precautions. It is well to remember, however, certain essential rules:

- When you intend to pass another vehicle, shift a little toward the center in order to observe the road ahead, switch on the direction indicators and signal your intention with the horn or, at night, with **a brief flashing of the headlights.**

- **Never** overtake on a blind curve, on a hill, at an intersection or in any case when you are not certain to pass easily and without danger to others and yourself.

- Overtaking a car in the process of passing another vehicle is strictly against the law.

- Be wary of go-ahead signals from unauthorized persons. Don't assume that the car you wish to pass will slow down and give you way and . . . be ready for any unexpected event.

- Don't brush by another motorist; a sudden swerve on his part might cause a serious accident.

- Be watchful for children suddenly darting across the street or persons stepping out from behind a parked car or other obstacle. **Always try to foresee the reactions of others.** While not 100 percent infallible, this rule represents at least a reasonable course of action.

DON'T BE A "WISE GUY" BY TRYING TO PASS A LINE OF CARS BLOCKED IN YOUR DIRECTION

- **Never** stop your car on a curve, near an intersection or on a grade. It is dangerous for you and for others.

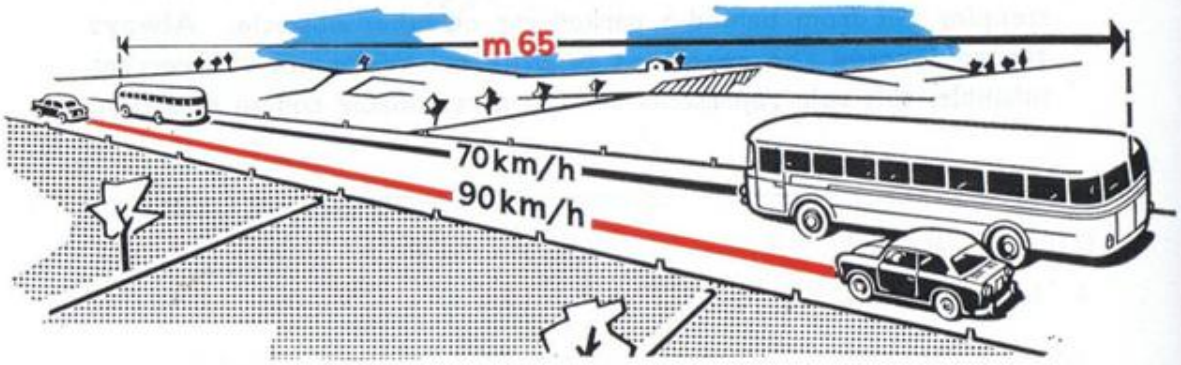
- Finally, if you wish to inform a trailing vehicle of your intention to pass the car ahead, give the proper signal with the direction indicators.

- When following a vehicle, especially on gravelled or stony roads, keep at a fair distance form it to prevent the hazard that stones thrown by the wheels of the preceding vehicle may hit your car, particularly the windshield.

When passing another vehicle going your way, its lenght will seem longer than it actually is. For example in passing a bus travelling at 40 m.p.h. (70 km/h) while your speed is 56 m.p.h. (90 km/h), it is exactly as if you were passing a bus six times longer.

Theoretic Overtaking Distances

Speed of bus or truck with trailer (km)	70 (11-meter Bus)				60 (15-meter Truck with trailer)				
Speed of car (km)	80	90	100	110	70	80	90	100	110
Theoretic distance to pass (meters)	116	65	48	40	168	96	72	60	53



On the Freeway

- To drive safely you **must be sure of yourself and of your car.** Therefore, do not indulge in race-like rushes if you feel fatigued: travel at a speed that best fits your physical condition.
  Motoring on freeways calls for a different sort of driving than on a normal roadway: form the habit of **looking farther ahead and behind.**

- **Speed:** go reasonably fast; for instance, be fast in wedging into the traffic (to reduce the difference in speed between you and those who are already speeding by) but **keep a reserve of power while cruising** to cope with any possible emergency and to avoid throwing your money away (travelling consistently at around 4/5ths of your top speed will give excellent results, particularly if accelerator pedal is occasionally released for a while).
  Once you have entered the flow of traffic, **keep strictly in the center of your lane** (stripes are there to guide you) assume a correctly comfortable posture (do not rest your elbow in the window or dangle the arm outside!) and **glance very often at the rearview mirror.** Now and then observe the instrument cluster: if any red light (other than the fuel reserve) is on, move to the emergency stopping lane or the parking areas, and verify if there is any trouble. After a long trip, check oil and water levels.

- **Safe distance:** have you an idea of how much space you will need to stop the car, especially at the high freeway driving speeds?
  In any case, leave a safe distance between your car and the one you are trailing, depending of course on the speed you are keeping and the road

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FREEWAY CRUISING AT 4/5ths OF THE MAXIMUM SPEED WILL GIVE BEST RESULTS

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pavement conditions (on freeways, this means about a hundred meters on the average). Remember also that, in emergencies, it might happen that the very difference between the cruising speed you chose and your top speed will be the factor that gives you a chance to buzz out of a difficult and dangerous contingency.

- **Overtaking and passing:** before you start overtaking and passing a vehicle going in the same direction, first estimate the speed differential between you and the vehicle you wish to pass, then:
  - — make sure, **always and in advance,** you are not being in turn overtaken by a faster car behind you (or a car which travels at such a speed as to pass you shortly);
  - — switch on the proper turn indicator, **always and in advance** (neither at the last moment, nor too early!);
  - — move into the passing lane smoothly and crack the accelerator to full throttle; if you realize that your guess on the speed of the other car was wrong, do not insist in the passing maneuver and renounce monopolizing the passing lane: roads belong to all motorists!

  After passing the vehicle and before returning to the right lane wait until you can see the vehicle you are passing in your rearview mirror; of course, if a fast car is closing in behave accordingly, but without causing trouble to the vehicle you just passed.

- As to your car:

  Tires: inflation pressures (cold tires) must be as specified; check that each pair of tires is inflated exactly to the same pressure.
  In addition, and especially in summer, **do not reduce** inflation pressures since you would cause a further increase in tire temperature: just the contrary of what you wish to obtain! Rather, increase pressure by two tenths if the car is fully laden.
  Drive at reduced speed if your tires are **worn smooth:** otherwise, you could suddenly become a killer and a suicide. Still better, buy new tires.

  Brakes, oil, water, fuel: everything in order? If not, check and refuel before entering the freeway.

  Lighting and signalling system: even in daytime it must be perfectly operating, with lights and direction indicators efficient, headlamps correctly aimed and rearview mirror properly positioned.

Night Driving

- A fundamental rule, and the obvious one for making night driving safe and pleasant, is to keep the car in perfect general working order, and in particular, the light and signal systems. By paying strict attention to the regulations, night driving can be as safe and as pleasant as day driving. On curves, hills and at intersections, flashing the headlights is the surest method of signalling, but... guard against surprises - which in this case might be an encounter with an oncoming vehicle.

- Regulations decree that high beams must be momentarily dipped at the approach of another vehicle. Switch on the low beams as soon as you think it safe to do so (or when a request signal comes from an approaching car), **at the same time slowing down** for elementary reasons of caution (the ever present emergencies!). Avoid annoying fellow motorists with your high beams, especially at short distances.

- **At the moment you pass an oncoming vehicle, keep your eyes on the edge of your side of the road rather than look into the headlights of the approaching vehicle.** This habit will prevent excessive eye strain and at the same time save you from driving blind.

- When dazzled, slow down. Better still, stop.
Never drive when you are " blinded ". It is extremely dangerous!

DON'T LET YOUR HEADLIGHTS BLIND THE OTHER FELLOW IF YOU DON'T WANT TO BE BLINDED

- When following another vehicle which you do not intend to pass, **dim your lights** and keep at a safe distance **in order not to disturb the driver ahead.**

- **At dusk, don't hesitate to switch on the parking lights** but not the headlights which would render visibility more precarious for oncoming motorists.

- When overtaking, eliminate the reflection of headlights in the rearview mirror by turning the mirror to the side (unless it is of the anti-glare type) and speeding up enough to out-ride these reflections. Then, re-set mirror in the correct position.

- Last, **remember it is illegal and dangerous to tamper with the electric system** which is adjusted according to regulations.

Winter Driving

- Be especially careful when driving on wet or slippery road surfaces and **avoid braking the car suddenly,** to prevent jamming the wheels and losing control of the car. Utilise the engine as a brake, shifting into a gear lower than you would ordinarily use.

- On icy surfaces, travel at a considerably reduced speed and very cautiously. Steer calmly, use the brakes with moderation and change gears gently. Avoid coasting with the gears in neutral, even when about to stop, to prevent unpleasant surprises.

- Naturally, to avoid the danger of skidding on snow or ice, use chains, or equivalent means, on the driving wheels. If the car begins to slip, steer wheels gently in the direction of the skid: don't accelerate, don't touch the brakes but... follow the situation alertly!

- To start the car on slippery ground (snow, ice, mud) shift to second, third or direct drive rather than first, being careful to release the clutch slowly and to accelerate with extreme care.

- **When the atmosphere is hazy, don't hesitate to switch on the parking lights.** Should visibility be poor because of fog, use the low rather than the high beams, because the tiny drops of moisture in the fog act as diminutive convex mirrors which reflect light and form a dazzling curtain. With the low beams, reflection is at a minimum. When using the fog lamps (two, symmetrically arranged) **do not forget to keep also, and only, the parking lamps ON.** This is imposed chiefly by **common sense** and **good defensive driving** (for one thing, your own car will be more visible at rear).

TIRE GRIP DIMINISHES ENORMOUSLY ON GRAVELLED, WET, AND ICY SURFACES

RUNNING INSTRUCTIONS

BEFORE STARTING OUT

- Open the garage door before starting the engine, especially if the garage is small and poorly ventilated. **Exhaust gases are toxic** because of their carbon monoxide content which, being colorless and odorless, is therefore doubly dangerous.

- Glance at the tires. If they appear slightly deflated, check with a pressure gauge, and, if necessary, inflate them to the correct pressures given in your car " Instruction Book ".

- If the last trip was long or if the car has not been used for several days, check the water and oil levels in engine.

- Check the operation of direction indicators, headlights, stop, parking and license plate lamps.

- Finally, check the fuel level in tank.

IGNORE SPEED CHALLENGES

STARTING THE ENGINE

- Be sure gearshift lever is in " neutral " before starting the engine. At the same time, depress the clutch pedal to facilitate starter operation. This precaution is even more important at low temperatures.

- If carburetor is provided with a choke, don't use it more than necessary and **don't forget to release the control after use.**
  Any servicing that might be required should be handled by FIAT Service Stations or the Carburetor Manufacturer.
  While for cold starts the accelerator pedal must not be pressed, when engine is warm it may be necessary to push the pedal in to stroke-end.

- Let the engine run moderately for a few seconds in summer and a little longer in winter.

- **Never race the engine when still cold or during the first few minutes after starting,** to ensure adequate lubrication of all moving parts. Instead, keep the car in a gear lower than normally required for a few minutes after driving away, while continuing to accelerate with moderation.

Warm Starts

- Since higher temperatures accelerate fuel evaporation, to avoid an excessively rich mixture and a difficult start it is not advisable to use the choke with a warm engine or during warm weather.

- When the engine is very hot and starting difficult, it is advisable to keep the accelerator pedal pressed down to the floor, while at the same time actuating the starter motor.

Cold Starts

- The engine should start easily even at the lowest temperatures provided the operating conditions are normal and the rotation speed of the starter is sufficiently high. This speed will be too low if:

  — battery is insufficiently charged;

  — engine oil is too thick.

  Starting may also be difficult owing to:

  — evaporation of fuel in the line from pump to carburetor (in this case, two or three starting attempts will make up the fuel required);

  — air infiltration into the intake manifold (deteriorated gaskets, or excessive clearance between valve guides and stems);

  — lack of compression (broken or stuck piston rings, valves oxidized or with burnt seats).

- **Don't persist in running the starter motor if engine does not start. Instead, check ignition and fuel systems.**

AFTER STARTING

- With warm engine at normal r.p.m., the oil pressure should remain at approximately 35 to 64 p.s.i. (2,5 to 4,5 kg/cm²) depending on the engine type. This pressure can fall to 7 p.s.i. (0,5 kg/cm²) if the warm engine turns slowly, and can rise to 70 to 100 p.s.i. (5 to 7 kg/cm²) if the oil is still dense because of low engine temperature.

- If the car is equipped with an insufficient oil pressure indicator use this pilot light as a guide and **remember that with a warm engine at a low r.p.m. rate the warning signal may light up even if conditions are quite normal.**

HIGH SPEEDS HEAVILY TAX FUEL/OIL CONSUMPTION AND TIRE WEAR

... ON THE SUBJECT OF ECONOMY

There are many determinant variable items which have a direct bearing on motoring budgets: fuel/oil consumption, tire wear, maintenance, repairs and replacement of worn parts. But other factors also influence the overall picture, and among those over which the driver has little control are the operating conditions (which, basically, depend in part on the professional activity of the driver himself). Two factors depend solely on the driver, viz. his average speed and his driving habits.

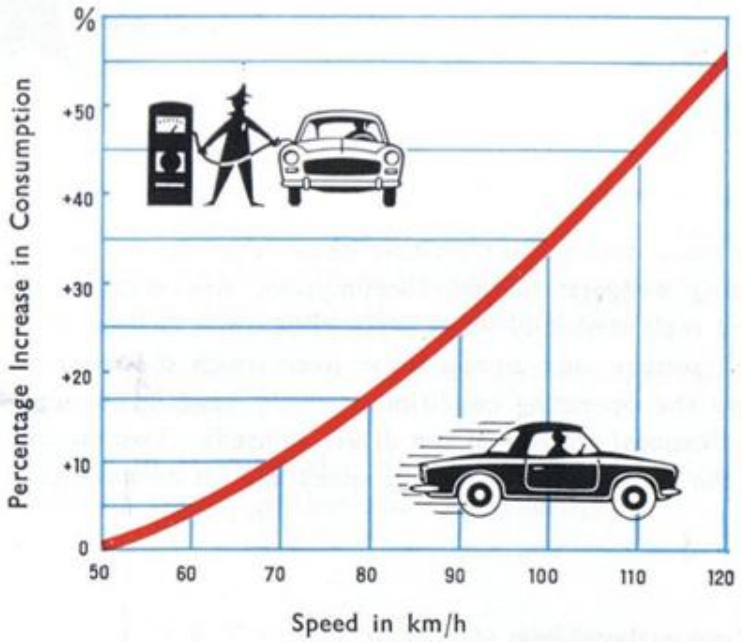
Fuel Consumption

Since we have already hinted at this subject, let us just recall a few of the basic principles.

First of all, it is evident that regular driving habits, even at moderately high but constant speeds, give more favorable economic results (and are actually preferable to moderate speeds) than driving with a series of angry bursts of speed frequently reaching the maximum, interspersed with violent braking at every real or presumed obstacle. The following graph clearly illustrates the cost of speed in terms of fuel consumption.

GOOD SENSE MEANS ECONOMY

▶ Bear in mind that a few minutes gained by travelling a certain distance at an excessive speed mean a considerable increase in fuel, tire and maintenance costs. It is practically the same as throwing money away. Common sense means economy. Avoid useless accelerations



Fuel Consumption versus Speed.

Supposing the fuel consumption of a car going at 50 km/h on a highway to be 8,5 lt it will increase by 25% at a speed of 90 km/h.

and racing the engine unnecessarily in low gears. Avoid sudden braking, if possible. Slow down by releasing the accelerator pedal slightly. Treat the automobile as a living thing which needs proper care (as clearly specified in the Manufacturer's instructions). Like all organisms, it has endurance limits that should not be exceeded. Don't ask for more than it can give. Don't crack the whip unless absolutely necessary.

A CONSTANT SPEED AT 3/4 OF THE MAXIMUM WILL GIVE A HIGHER AVERAGE GASOLINE MILEAGE

Feed it well, keep it clean and well-housed, and if any operational illness develops, have it doctored by a service station mechanic.

Oil Consumption

- Even in this case the old saying, " Spend more to spend less ", is applicable. Check the oil level often. Change oil regularly, **using the specified grades** and without being misled by illusions of false economy. **And above all, when starting, always remember to give the engine enough time to circulate the oil thoroughly.**

- This precaution applies in particular to a certain category of drivers, especially physicians, who, during their numerous calls on patients, force their car at harmful r.p.m. rates, start the engine frequently, alternating short trips with more or less long parking periods in the open. Consequently, the engine is not allowed to run at the r.p.m. rate for normal traffic. These recommendations are therefore directed first of all to physicians. " Don't let your automobile develop Doctors' Complaint ".

Tires

- In addition to the maintenance rules outlined on page 38, remember that tire wear is considerably affected by your driving habits (braking and acceleration, excessive speeds), as well as by excessive loads, low and high pressures. All these factors affect good roadability and make for uncomfortable riding on rough road surfaces. **Check the air in tires periodically, particularly for identical pressure in each wheel pair.**

Spare Parts

- Exclusive use of genuine FIAT spare parts is the best guarantee of top performance. When ordering spares refer to directions in the " Instruction Book ".

MAINTENANCE HINTS

▶ The « Instruction Book » gives the lubrication and inspection schedules to be followed at designated intervals which may be reduced or extended accordingly, depending on service. The need to lubricate the car or make specific checks depends on many factors: the climate (dry or damp) and the terrain or road conditions (frequent climbs, dusty or muddy road, congested city traffic with cold engine, etc.). In certain cases, e.g., tire pressure, maintenance depends essentially on the time element. In other cases, like the evaporation of battery electrolyte, replenishments depend, in addition to the time element, on the outside temperature and other factors. Hence, brakes need more care in mountainous than in flat areas; the clutch requires more frequent adjustments if the car is used principally in heavy city traffic, etc.

▶ Do not forget, however, that proper general lubrication of the automobile is extremely important and must be entrusted exclusively to a qualified and reliable Service Station. For ordinary maintenance operations, the Driver's direct concern is limited to the recommendations in the « Instruction Book ». Not all the maintenance operations described and required to keep the car in best operating condition can be carried out easily by the Owner who usually does not have the proper equipment at his disposal. Therefore, both for these operations and for partial or general overhauls, the car should be taken to one of the SERVICE STATIONS which FIAT has established in Italy and abroad to best assist its Customers. At these authorized FIAT stations any overhaul and repair work will be carried out systematically, rapidly and economically, thanks to experienced personnel and specially designed facilities.

▶ **The overhaul or maintenance operations described in this booklet for which the driver should see an authorized FIAT Service Station are marked by this service sign:**

ENGINE

Lubrication System

- We strongly recommend to use always **FIAT motor oils** of the grade specified in the « Instruction Book »: FIAT engine oil, both of the **VS series** and of the **Multigrado** type, is a **detergent, antisludge Supplement 1 oil which satisfies the requirements of the five class MS sequences** and is hence suitable for long replacement intervals.

- It cannot be expected that oils may be used indefinitely because, even under normal service conditions, they are becoming contaminated with water, metallic particles, carbon particles getting loose from combustion chambers, acids, or decaying products of the oil itself. For these reasons the oil **must be periodically changed.**

- True, too frequent oil changes are costly and may represent a needless expense, but changes at long intervals exceeding the Manufacturer's specifications may be responsible for excessive oil consumption and such an amount of sludge that engine life is shortened.

- No general rule can be formulated for oil change frequency (excepting the first replacement when engine is new) since the frequency of oil replacements depends not only on the engine type but also on the **extremely variable driving conditions.**

- **Under normal conditions,** change the oil at the intervals recommended in the Instruction Book. However, if conditions are particularly severe (such as short runs **at low speed in low outdoor temperature and with frequent stops,** etc.) **change the oil at shorter intervals.**

- Remember that **in case the engine has been overhauled** and barrels have been rebored, or liners, pistons and rings have been replaced, **the oil change frequency must be the same as for a new engine.**

- When delivered, the engine **is already filled with a special running-in oil** and the addition of special additives in neither necessary nor recommended. No Manufacturer can be held responsible for damages deriving from the unauthorized use of such compounds, both during and after break-in.

- For **a proper cleaning** of engine proceed as follows:

  a) drain sump oil while warm;

  b) pour in **FIAT L 20** flushing oil up to the « Min » mark on indicator and run the engine at approximately 1000 RPM for 10 minutes;

  c) drain the flushing oil;

  d) refill with new lube oil of the specified grade.

- Detergent oils (*) become darker than the common non-detergent oils but their lubricating properties are not impaired.

(*) Engine lube oils are generally classified according to three types, depending on the service for which they are intended, i.e., Regular, Premium and Heavy Duty (or also, according to the new API classification: ML, MM and MS for Otto cycle engines and DM, DS and DG for diesel engines). With regard to the Otto cycle engines, the following oils are recommended in relation to the conditions of operation: Regular (ML) for normal or light duty, Premium (MM) for severe conditions (long trips at high RPM and high loads) and Heavy Duty (MS) for extremely heavy conditions (use of the vehicle in prevailingly intermittent duty with frequent cold starts and short runs, etc).

On the contrary, thanks to their peculiar characteristic of keeping in suspension the several contamination products, these oils can be used for long intervals without harm to the engine.

- To effect a more thorough cleaning of the sump, remove it from the engine. At the same time, take advantage of this opportunity to clean the oil pump intake filter.

- In engines equipped with a by-pass filter, check filter efficiency by running the engine for several minutes to allow for proper oil warm up. If the filter body remains cold, the filter is inefficient, and it will be necessary to determine whether the defect originates from obstructed ducts or a dirty filtering cartridge. In the latter case, the cartridge must be replaced.

- Never run the engine without the filtering cartridge, since in addition to the troubles resulting from unfiltered oil, the pressure drop would be too great.

- On engines equipped with centrifugal oil filter, dimensioning is such that no maintenance of filter is required except during major overhauls or unless otherwise specified in the " Instruction Book ".

Oil Pressure Relief Valve - Do not vary the relief valve adjustment. If the pressure indicated by the gauge or the pilot lamp is lower than specified, have the lubrication system inspected.

FIAT SERVICE

AN ADEQUATE PERIODIC LUBRICATION CONTRIBUTES TO APPRECIABLE SAVINGS IN FUEL

Fuel System

▶ Should irregularities develop in fuel delivery to carburetor, first check tightness of pipe connections, then inspect the filters as follows:

Fuel Pump Strainer - Remove pump lid, take out strainer and wash it thoroughly in gasoline. Clean the fuel arrival chamber, and on certain types of pumps, unscrew the drain plug located below the fuel arrival connection. Particular know-how is required to disassemble other pump parts.

Fuel Tank Filter - Remove the fuel outlet connection and take it out with the filter located at the end of the suction pipe. Wash the filter thoroughly in gasoline.

Carburetor Strainer - Remove the cover of the carburetor body or the fuel arrival connection and take out the filtering element. Wash it thoroughly in gasoline.

Carburetor - The idling speed should be adjusted only in the case of irregular engine operation, especially at low speeds, and may be corrected by adjusting the throttle setscrew.

If the engine tends to stop when the accelerator is released in normal operation, setscrew should be tightened to increase idling speed r.p.m. rate. In some cases it will be necessary to adjust also the mixture richness by the relevant setscrew.

It is not advisable to disassemble inner parts to avoid the risk of their possible deterioration or inaccurate reassembly. If carburetor trouble or any other irregularity in fuel system operation persists, further disassemblies and adjustments will be required.

Valve Gear

- Check valve tappet clearance periodically during the first 1800 miles (3000 km), with engine cold. See that clearance is as specified in the "Instruction Book".

- Remember that if the clearance is greater than recommended, the valve tappets will be noisy. If clearance is too small, the valves do not close well, giving rise to various troubles, including backfire, overheating and subsequent rapid valve wear. In either case, departure from specifications will cause a variation in valve timing and will ultimately result in lower engine efficiency.

NEVER OVERTAKE ON BLIND CURVES, UPGRADES OR AT INTERSECTIONS

Conventional Water Cooling System

- Check that the steam vent valve located in the filler neck or in the cap opens freely. Lubricate valve, if necessary, with a few drops of oil, using an oil-can or the engine oil dipstick.

- When radiator cap must be taken off, after a long interval of engine operation under load or, at any rate, when you have to check the water level, **be careful not to scorch your hands.** Turn cap in two stages:
  1) initially, up to the first stop position (which allows the discharge of the pressure from the system);
  2) only when pressure is relieved, turn further until the cap comes off.

- If water level is very low and the engine rather hot, do not top up with cold water while the engine is turned off, to avoid cracking the cylinder block. **Water level should reach approximately 1 to 2 in. (3 to 5 cm) from the top edge of the radiator filler cap. Frequent refills to higher levels are not only pointless but detrimental.**

- Water must be the softest possible and it must not contain chlorinated compounds.
  Using distilled water is neither useful nor recommended.

- As a rust-inhibitor, particularly in Summer, some special **FIAT OER emulsifiable oil** (0,5% by volume) should be added to the water, after thoroughly flushing the radiator.
  With anti-freeze mixtures already containing inhibitors, the addition of FIAT OER emulsifiable oil is not necessary.

- When the use of **chlorinated water** is unavoidable, the addition of the **FIAT OER emulsifiable oil** becomes **indispensable,** in the proportion of 0,8% by volume.
  The recommended procedure is:
  1) **on new engines:** wash accurately the radiator with running water, then fill with the emulsion prepared separately;
  2) **on old engines:** have the system cleaned thoroughly by skilled personnel, then filled with the emulsion prepared separately.

FIAT SERVICE

▶ When the temperature approaches 32° F (0° C), it is imperative to avoid the danger of freezing. Replace the water in the cooling system with an anti-freeze mixture.
Mixtures of neutral glycerine and water or glycol (ethylene, propylene, etc.) and water are normally preferable, **provided they are corrected with the addition of corrosion inhibitors** which do not react with the salts of hard waters.

▶ **The special FIAT antifreeze mixture is recommended.**
Percentages in relation to freezing points are:

FIAT SPECIAL ANTIFREEZE MIXTURE AND WATER

Freezing Point	17° F (-8° C)	5° F (-15° C)	-13° F (-25° C)	below -32° F (-35° C)
Antifreeze: % in volume	20	30	40	50

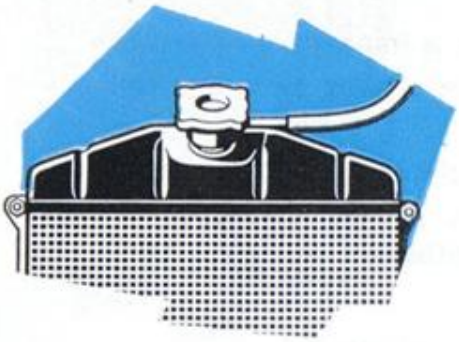
Should the FIAT antifreeze mixture not be available, use only suitably inhibited glycol-base mixtures of high commercial quality, following the labelled instructions.

▶ The cooling system should be cleaned and flushed **at least twice a year**: in Spring and in Fall, and, in any case, immediately before adding the antifreeze. Particularly in Spring, on draining the antifreeze it is advisable to proceed with an accurate flushing. Empty the system through the drain cocks located under the radiator and on cylinder block. Fill the radiator with tap water and run the engine for about 10 minutes at low r.p.m. Shut off the engine, then start it again, at the same time draining the water. Let the engine cool down and then circulate running water in the radiator and cylinders, leaving the drain cocks open. Close the cocks and fill radiator to normal level.

▶ If water persistently heats up at normal running speeds, the trouble is probably due to calcareous deposits. By continually circulating, evaporating and stagnating in the metal compartments, ordinary water deposits sediments and scale that must be removed.
This operation, however, should be performed at one of our Service Stations using an especially formulated « descaler for radiators » which does not attack the cooling circuit materials.

FIAT SERVICE

HAVE YOU CHANGED THE SUMMER GRADE OIL FOR THE PRESCRIBED WINTER GRADE?



Permanent Fluid Cooling System

▶ Permanent fluid cooling systems employ a 50/50 water and FIAT "**Paraflu 11**" mixture; this mixture has anti-oxide, anti-corrosion, anti-foam, anti-scale properties and does not freeze down to — 35° C.

▶ **Occasionally** check level of coolant in translucid expansion tank **exclusively** with cold engine; level must always be well above the Min. mark.
When engine is very hot the level might rise noticeably: this might also happen immediately after stopping the engine.

Should coolant level drop below the tank "Min." mark, **take the car to a FIAT Service Station for a cooling system check and refill.**

▶ Only in case of an emergency (sudden heavy coolant losses) can the system be filled with tap water, operating as follows:

— allow engine to suitably cool down;

— remove radiator cap and tank cap, after breaking the lead seals, if any;

— pour in water slowly through the expansion tank filler port until water overflows from radiator filler neck;

— refit the radiator cap and pour in some more water in tank until level rises to a few centimeters from tank filler;

— refit tank cap.

As soon as possible have a FIAT Service Station repair the fault, **refill with permanent coolant** and apply new lead seals, if previously fitted.

▶ **Every 60.000 km (36,000 miles)** or **every 2 years,** whichever occurs first: have the coolant replaced at a FIAT Service Station.

Ignition System

Ignition Distributor - When adjusting and lubricating the ignition distributor, care must be taken not to foul the breaker contacts, otherwise rapid wear and ignition irregularities may result. If dirty or oily, clean contacts with a cloth dipped in gasoline, taking care not to leave any lint or foreign matter. If damaged or unevenly worn, smooth contacts with a fine grain file and re-adjust the gap to the value specified in your Instruction Book: in general .016″ to .019″ (0,42 to 0,48 mm). Never use sand paper or other abrasives.

Spark Plugs - If misfiring occurs in one or more cylinders, check the spark plugs. Clean the electrodes with a metal brush dipped in gasoline (or better, have them sanded) and check that the gap is as specified—see your Instruction Book—in general .020″ to .024″ (0,5 to 0,6 mm). If this gap is wider through long use, bend the outer electrode toward the center one. Do not touch the center electrode to avoid breaking the porcelain insulator. If porcelain is blackened with carbon deposits, pour a little alcohol or gasoline inside the capsized spark plug and clean it after a few minutes with a metal brush.

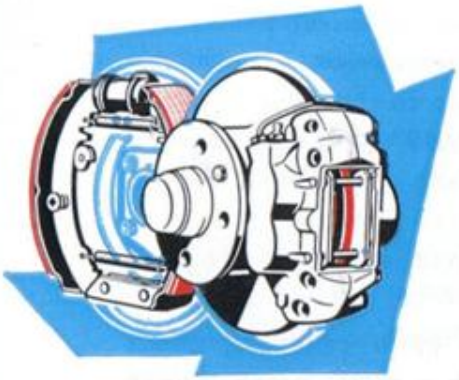
▶ **Make it a habit to check spark plugs periodically every 6,000 miles (10.000 km), adjusting the electrode gap and, if possible, sand blasting the electrodes. Results will be outstanding!**

EVERY DIMINUTION OF VISIBILITY CAN BE COSTLY

CHASSIS

Clutch

The clutch pedal should have a certain amount of free travel before it actuates the clutch. This free travel is sometimes reduced or annulled altogether as a result of facings wear. It is essential to restore this travel by proper readjustment, to avoid the danger of clutch slippage with consequent overheating, unnecessary wear of facings and of throwout bearing, with resultant noisiness.



Brakes

Use only the special FIAT brake fluids, which, in addition to the fact that they do not corrode or deteriorate rubber gaskets, have a sufficiently high evaporation point to prevent vapor locks that would render brake action inefficient. If unavailable, use an equivalent non-mineral grade HD fluid.

With the translucent reservoirs the fluid level can be checked visually without removing the cap; also during refills the time the fluid remains in contact with the atmosphere must be kept to a minimum as this alters the fluid properties.

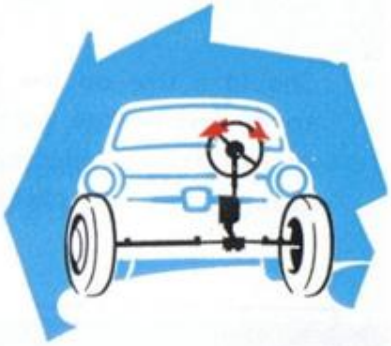
Brakes Adjustment. - When brakes are not applied, check that the wheels (jacked up clear of ground) revolve freely. With pedal pressed half way down, the wheels, when turned by hand, should revolve only after exerting considerable force.

If braking unbalance on one wheel is appreciable, or if the pedal free travel has become excessive, have the brake system checked and adjusted (see the car " Instruction Book ").

FIAT SERVICE

Warning. — Irrational use of brakes may cause overheating and possible formation of vapor locks in the lines. This condition is immediately revealed by brake pedal sponginess and poor braking even after depressing pedal down to footboard. The same trouble will occur if air pockets are present in the system.
If your car is equipped with a **brake servo** (whose task is that of increasing the brake fluid working pressure, the load required on pedal remaining unchanged) **do not** use the brakes unnecessarily, especially in hard braking, in order to prevent abnormal wear and to be sure you can always rely on the positive efficiency of brakes when needed most.

Steering, Wheels and Tires



- Should excessive steering wheel play or any other steering irregularities become evident after a long period of use, do not hesitate to have the play in the steering units checked and adjusted, if necessary. It is obviously important to have these adjustments made exclusively by specialized personnel.

- If steering system is properly adjusted, the vehicle will continue to run straight ahead when hands are taken off the steering wheel. By the same token, the steering wheel should return to straightahead position after every turn. To ensure these conditions, as well as to eliminate unusual steering vibrations, the toe-in and camber should correspond to the values indicated in the "Instruction Book". These adjustments must be checked periodically to avoid steering irregularities and excessive tire wear.

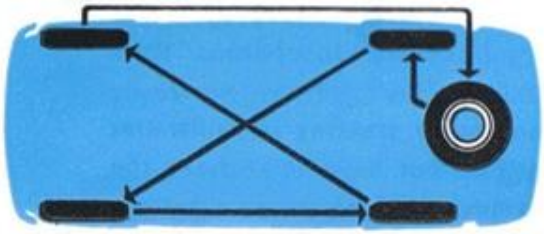
- Tires must be kept at specified pressures. The driver should **have tire pressures checked regularly** when refuelling or should perform the check himself, using an accurate pressure gauge. (Be sure valve caps are properly tightened to avoid unpleasant surprises!). When checking pressure, tires must be cold.

- On the road, especially in summer, tire pressure may increase as a result of heat: in this case DO NOT reduce the tire pressure because the only result would be a further increase in temperature with higher tire pressures and fatigue.

INSUFFICIENT PRESSURE REDUCES TIRE LIFE

CHECK TIRE PRESSURE FREQUENTLY!

Should a tire on the right side show signs of unusual wear, attempt to determine the possible causes (driving conditions on the road, incorrect toe-in adjustment if it is a front tire, etc.). If necessary, interchange tires as a check.



To equalize tire wear, change the tires (spare included) in criss-cross fashion every 3,000-6,000 miles (5.000-10.000 km).

- Check the spare tire pressure every month. Blowouts are infrequent nowadays but it is better to be on the safe side in case of an emergency (at night, in the rain, on lonely roads, when driving alone, etc.).

- It is a good habit to remove the tires approximately every six months and inspect them for small stones, pieces of glass or nails that might eventually penetrate the tread. Check the condition of plies, and sprinkle with talc. This operation should be performed every time the inner tube is repaired. Avoid large patches that affect balance and are dangerous especially at high speeds.

- Sometimes wheels must be balanced by fixing counterweights to the inner or outer side of rim.

It is obvious that after changing the tire in cases where it has undergone extensive repairs, the wheel must be balanced again. Whenever abnormal car oscillations are encountered in driving, first check wheel balance.

FIAT SERVICE

CHANGE YOUR TIRES IN CRISS CROSS FASHION EVERY 5.000 - 10.000 KM - TIRE WEAR WILL BE REDUCED!

▶ Two final suggestions:

1) After a long drive without stopping, check tire temperature with the hand to see if it is excessive or non uniform (friction on the road surface raises the temperature considerably).

2) If, after long use, the tire tread is worn smooth, do not hesitate to buy new tires, beginning with the front pair (considering that these are the steering wheels), and discarding the more worn tires.

ELECTRIC SYSTEM

Battery - Check the electrolyte level regularly, adding distilled water as required to maintain the specified level above the separators. Always use distilled water, never sulphuric acid. The water evaporates but the acid remains. Guard against using non-distilled water, or distilled water that has come into contact with metal containers.

▶ Water should be added with battery cold. Do not spill water on the battery top, which should be clean and dry at all times.
If in one of the cells the level is noticeably lower than in the others, the cause can probably be traced to a leak from a crack in the case which requires immediate repair.

▶ Check that posts and terminals are clean and well taut. Smear them with pure, ropy vaseline to prevent oxidation.

▶ Owing to the presence of the generator regulator, during vehicle operation the battery does not require any periodical recharge by external means; the recharging system is in fact more than sufficient to keep up the battery's efficiency.

However, if the battery does run down during normal car operation, the cause must be ascribed to faulty generator (or alternator) or regulator operation. When car is garaged for long periods, recharge the battery once a month by external means.

▶ Battery electrolyte gravity checks must be made using a hydrometer and at about 25° C room temperature.

The gravity reading for a charged battery must be about 1,28 for **« regular service »** units and about 1,23 for **« tropical service »** units. With nearly discharged batteries, the gravity figure drops to about 1,16 **(regular service)** or about 1,1 **(tropical service).**

Generator and Starter Commutators - Every 18,000 miles (30.000 km) it is advisable to check the wear and contact conditions of brushes, replacing them as required. Also replace chipped brushes whose defective contact might cause armature deterioration.

Alternator slip rings - Normally the alternator requires no maintenance. Only during overhauls or every 36,000 miles (60.000 km) the slip rings must be accurately cleaned and the brushes checked for wear.

▶ For brush replacements, use exclusively the brushes **supplied by the FIAT Spare Parts Service.**

This is important, because only the genuine replacement brushes can give the specified life and performance of both generator (or alternator) and starter motor.

DO YOU THINK YOU ARE A GOOD DRIVER BECAUSE EVERYONE SAYS YOU "ALWAYS" DRIVE SO FAST?

Generator Regulator - This unit should not be tampered with for any reason whatsoever by non-skilled personnel, since it must be inspected according to precise instructions, and with adequate means and instruments, to restore perfect efficiency.

Alternator Voltage Regulator - The same directions outlined above for the generator regulator hold also for this unit.

▶ Should a radio be installed on the vehicle, the factory instructions must be carefully followed or else the insertion of condensers in given circuits will cause rapid wear of regulator contacts.

Lighting and Signals - Substitute burnt bulbs exclusively with bulbs of the same type and wattage. Weaker bulbs will diminish visibility whereas stronger bulbs will draw a greater amount of current and overload the generator (and, hence, discharge the battery).

▶ **Under all circumstances avoid using bulbs of different type and wattage for the signal system and headlamps.**

▶ Check the performance of the flashing direction indicators. If the number of flashes is not between 70 and 100 per minute, replace the automatic switch (flasher).

Aiming the Headlamps - It is essential that headlamps be aimed according to the directions given in the « Instruction Book », not only to ensure the most efficient illumination, but to avoid disturbing other drivers and paying fines.

Have the headlamp aim checked periodically, remembering that vehicle load influences correct aiming of low beams.

DO UNTO OTHERS AS YOU WOULD HAVE THEM DO UNTO YOU

BODY

Body Exterior

- The body washing intervals should be dictated by use and, of course, by the condition of the roads travelled and the seasonal and climatic factors.
  In case the washing is not entrusted to a Service Station, proceed as follows if you decide to do it yourself.
  First clean the lower part of the vehicle, including the wheels, with a water jet, using a sponge for the dirtier parts. Next, wash the body shell avoiding excessive pressure of the water spout. Finish washing with a sponge, rubbing it first lightly over the paint (to prevent scratching the paint with mud particles or dust residues) then, more strongly, but with plenty of water and rinsing the sponge often. Dry the car thoroughly with a clean chamois to eliminate all traces of water.
  Detergent compounds, if used for washing, should be free of any abrasive substance.

- To avoid damaging the windshield wiper, pass the sponge or the chamois under the wiper blades, pulling the blades straight out from windshield without side tilt.

- If the finish lacks luster after washing and drying, one of the many commercial polishing compounds can be used. If the absorbent cotton used to apply the polish cleans off some of the loose pigment, there is no cause for alarm as the brilliancy and life of the finish are not affected. However, do not make the use of polishes an abuse.

- **Grease, oil and tar spots** can be removed from the body paint by wetting with some gasoline and immediately wiping with a dry cloth. If the tar has hardened, use one of the many good spot removers on the market.

- To preserve the luster of body finish:
  - — avoid leaving the car parked in the sun;
  - — never wash or polish the car in the sun, especially in summer, or when the hood is still hot after a long drive;
  - — avoid spilling gasoline, alcohol, sodium compounds, brake fluid or windshield solvent on the body finish.

- To clean **chrome parts:** apply some neutral vaseline then rub with a soft and clean rag, also with a chamois.

- Do not use cloths dampened in gasoline to clean **plastic parts** so as not to spoil their luster.

- **Windows** and **windshield** should be cleaned with a linen cloth or a **very soft** chamois. For very dirty windows, use the windshield washer solvent: 30 cc FIAT D P 1 liquid concentrated solution to every liter of water.

- Grease periodically, and with moderation, the hood and deck lid latches as well as the door hinges.

Body Interior

- **At least once a month** dust the cloth upholstery, preferably using a vacuum cleaner. **Grease stains** can be removed with some light gasoline, sprinkling the spot with talc immediately after; finally, briskly brush off the talc.

- Woven **fiber carpeting** can be cleaned with a sponge dipped in gasoline; rubber mats with soap and water.

A CLEAR WINDSHIELD IS A "MUST" FOR GOOD VISIBILITY: KEEP IT CLEAN AND CHECK WIPERS EFFICIENCY

▶ **Imitation leather** parts can be cleaned with a wet and soapy sponge, or cloth; after a few minutes, rinse carefully with clean water and dry well, possibly with a chamois.

Periodical Checks

The body is constantly subjected to shocks due to road conditions, and to the alternating action of the sun and severe weather. It will not remain free of squeaks indefinitely if proper maintenance is neglected. **The body and frame should therefore be regularly examined every 12,000 miles or every three or four months, depending on car service.**

JACKING UP THE CAR

▶ All cars are provided with a jack which must be inserted in one of the brackets provided under the frame near the wheel to be raised. To prevent an accidental car movement, especially on a grade, apply the hand (auxiliary) brake which mechanically operates the rear wheel brake shoes. On earlier model cars where the hand (parking) brake acts on the propeller shaft place also a chock under one of the back wheels resting on the ground: this is doubly important when the raised wheel is at the rear, because under these conditions the parking brake is useless.

ALWAYS KEEP TO THE RIGHT: YOU WILL NEVER REGRET IT !

RULES FOR VEHICLE GARAGING DURING LONG INACTIVITY PERIODS

If the vehicle is not going to be driven for more than a month, it is advisable to take the following precautions:

- Keep the vehicle in a perfectly dry and, if possible, well ventilated place.
- Drain radiator and cylinder block water, preferably with engine warm.
- When vehicles are provided with heating equipment, drain the heater radiator (especially important for anticipated temperatures below freezing). This operation is of course omitted when engine cooling system is of the sealed type.
- Empty the fuel tank, fuel pump and carburetor.
- Clean air, oil and fuel filters.
- Inject some lubricant into the cylinders through the spark plug holes and crank the engine a couple of seconds with the starter to distribute a film of protective oil on the inner walls.
- Take out the battery, storing it in a place where there is no danger of freezing, and recharge it once a month.

HAVE YOU READ THE "INSTRUCTION BOOK"?

Remove the tires and sprinkle the plies and inner tubes with talc; store them in a dark, cool place neither damp nor airy.
If tires are left on wheels, the vehicle should be lifted so that wheels are completely off the ground. In this case, it is advisable to deflate the inner tubes.

- Lubricate all the units provided with grease fittings.
- Clean the body and all exposed mechanical parts.
- Smear neutral vaseline or anti-rust grease on all unpainted metal parts.
- To prevent damage from moths, sprinkle the upholstery with naphthalin, camphor or similar products.
- If possible, cover the car with a tarpaulin.

Abuse of horn and exhibitionistic showing off by racing the engine do not denote good civic and highway education. Drive as noiselessly as possible and don't tamper with the muffler

DEFENSIVE DRIVING ALWAYS PAYS

INDEX

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