

Citroën's Original

***ICI COMMENCE
L'ADVENTURE***

2CV SECTION ONLY

of

May 1984

(English Language Version without Photographs)

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Edited by: C.Stuart, Nov 2005*

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 F 92208 Neuilly-sur-Seine Cedex Tel.: 759.46.20

For any information on the trip, please contact:
 Service des Manifestations Extérieures Citroën,
 F -92208 Neuilly-sur-Seine Cedex T61.: 759.38.50

BIBLIOGRAPHY

Quelques voyages en Citroën:

- “L’épopée de la Croisière Jaune”, par Jacques Wolgensinger (Gallimard, collection Folio-Junior).
- “2 hommes, 2 CV autour du monde”, par Jacques Cornet (Editions F.O.T.).
- “La terre en rond”, par Jean-Claude Baudot et Jacques Seguela (Flammarion, collection l’aventure vécue).
- “Au long cours en 2 CV”, par Claude Layec (Presses de la Cité).
- “Raid Afrique”, par Jacques Wolgensinger (Flammarion, collection l’aventure vécue).
- “La terre en liberté”, par Christian Galissian (Editions Arthaud).

“Elsewhere is as good a word as tomorrow”

Paul Morand

Every man dreams of wide open spaces, and ever since it was invented, the motor car has been one way of turning this dream into the reality of crossing the plains and deserts of the world.

At first the privileged few drivers, later followed by many more, reached out for the end of the world; that infinitely distant place where, as in non-Euclidean geometry, parallels meet: the position where, once upon a time, Africa, Asia, Europe and America met on the dim horizon of a newly spherical Earth.

Citroën's part in the writing of this automotive history has been considerable. Encompassing the first crossing of the Tanezrouft with the B2 half-tracks of 1922 and the 1973 crossing of the Ténéré by sixty 2CVs. Other landmarks have been; the trans-African “Croisière Noire” of 1924, the trans-Asian “Croisière Jaune” of 1931, the rally of 1,300 youngsters from Paris to Kabul and back in 1970 and the run from Paris to Persepolis in the following year.

Since the last war, the 2CV in particular, has provided the means by which young Europeans have explored far beyond their own frontiers.

This tradition, and reservoir of experience, has provided the inspiration for this brochure. It offers advice, and useful warnings. But the essential lies in your capacity for accepting and understanding. Travel is not a way of dropping out: it is one dimension of freedom.

For the rest, technical preparation and driving methods are a matter of common sense. Everyone will resolve in their own way, the seeming paradoxes which balance some factors against others. For example, some parts need to be strengthened in order to withstand driving on rough terrain - but this can expose the relative weakness of an associated component... Again, caution dictates that some spares should be carried; yet they add to the overall weight, which makes the vehicle more prone to break down, which can in turn tempt you to take even more spares... to the extent where some specialists are prone to advise that the only truly indispensable items are some rags to wipe parts clean of sand and dust, and galvanised wire for everything else.

Otherwise, you have only yourself to rely on. Henry de Monfreid used to tell his apprentice adventurers: “First, study plumbing.” Why? Because there are few places in the world where plumbers are not in demand.

Jacques Wolgensinger
Director of Information and Public Relations, Automobiles Citroën

1- THE VEHICLE

Each journey poses its own particular problems: this is why you can never be too careful in preparing a vehicle. You will find in this brochure, detailed instructions for the preparation of whichever Citroën vehicle you may have chosen, are going to buy, or already have.

A: CHOICE OF VEHICLE

Warning:

No matter how strong the vehicle, it must be clearly understood that it should never be overloaded.

The lighter you are, the better your chances of keeping going. One of the “Wolgen wisdoms” of the Raid Afrique was: “If you’re light you don’t stop: if you’re heavy, you flop”. It is better to leave without replacement parts, even without equipment, in order to remain light and thus to avoid the most likely cause of trouble. Experience shows that it is foolish to be overloaded and thereby to risk irreparable damage. It is as easy to read as it is to write, but you will discover that it is more difficult to do. The point is to avoid the temptation of anticipating trouble: weight is your real enemy. In order to keep it under control, you should weigh your vehicle on a weighbridge with all your luggage and equipment on board. Better still, weigh each item as you add it to the list, and keep a check of the running total. If you exceed the limits listed below then lighten the load: throw things out - cut your toothbrush in half!

Saloons	lbs.	kg.
2 CV	2050	930
Dyane	2030	920
Méhari 4x2	2105	955
Méhari 4x4	2425	1100

Estate cars/light commercials	lbs.	kg.
Acadiane	2570	1165

SPECIAL VERSIONS P.O. AND G.E.

If you do not already have a vehicle in which to undertake your intended expedition, you have the chance of buying a Citroën specially adapted to your needs.

In the case of most Citroën models, there exists in effect a P.O. (for Overseas Territories) or G.E. (for Grande Exportation) version modified to make it suitable for travel on rough roads and in harsh climates. These qualities must obviously be a prime consideration in your planning. Citroën’s special equipment is built-in during the course of construction: it is, therefore, very difficult to convert an existing vehicle to the same standard. This makes it important that you should specify at the time of your order, all those features you have chosen which would not normally be needed in European driving conditions.

2 CV, ACADIANE, MÉHARI P.O.

Among the smaller engined cars, your choice lies between the 2CV6 or the Acadiane van with P.O. option, or the two-wheel-drive Méhari 4x2 which has P.O. equipment as standard.

P.O. equipment comprises various items and chassis reinforcement (dry-element air filter, reinforced front cross-member and suspension arms, uprated dampers, reinforced platform, sump guard) which have been found desirable for operations over rough roads and open country.

You might also consider adding five 135-15 X tubed tyres to the P.O. package. In France, this would add about 2.2 to 2.6 per cent to the price of the standard vehicle, whichever one you consider.

2 CV - DYANE 6 - ACADIANE - MÉHARI

First stage

This level of preparation should be undertaken for journeys in Eastern Europe or the Middle East, such as the “Raids” Paris-Kabul-Paris (1970) or Paris-Persepolis-Paris (1971) where major problems and obstacles to driving are not expected.

Special fitting

- If your vehicle is equipped to P.O. standard already:
 - Fit two auxiliary lamps with protective grilles using relays in the existing electrical system;
 - Fit a powerful air-horn;
 - Fit two spare wheels with tubed tyres.
- If your vehicle is not to P.O. standard, then in addition to these measures you should also:
Fit P.O. type front bumper and sump shield: this is absolutely vital.
Refer to the table on page 19 for further details;

Ensure that all tyres are in perfect condition and fitted with inner tubes.

Spare parts

Mechanical

- 1 complete transmission
- 1 fuel pump
- 3 yards fuel piping
- 1 refill of engine oil depending on the distance, changes are essential every 10,000 miles,
- 3 wheel bolts.

Electrical

- 2 sparking plugs,
- 1 contact breaker set,
- 1 condenser,
- 1 coil,
- 1 voltage regulator,
- 1 alternator drive belt,
- 1 alternator rear plate with diode assembly,
- 1 box of spare bulbs,
- 2 spare fuses.

Tyres

- 2 spare inner tubes,
- 1 repair kit,
- 2 valve cores,
- 2 valve caps,
- 1 valve core remover.

Tools and other equipment

- 1 complete tool kit,
- 1 warning triangle (obligatory in many countries),
- 1 set tyre levers,
- 1 air pump, electrical or foot-operated,

1 lightweight nylon tow-rope,
1 roll of wide insulating tape,
1 small roll of steel wire,
1 vehicle inspection lamp,
1 torch with spare batteries.
Jerrycans of fuel depending on intended route and distance.
Jerrycans of drinking water, amount depending on circumstances.

Second stage

Preparation of a vehicle for a journey where it is likely to encounter more serious problems: Africa, India, Nepal, Pakistan (Asia generally), South America.

If you consider this type of journey, it is especially important to choose a P.O. type vehicle. The Raid Afrique of 1973 showed that the 2CV6 type P.O. can cope perfectly well with difficult routes.

Special fittings

For those who do not possess a P.O. vehicle, we advise the following preparation schedule which will bring a standard model close to P.O. standard except for the chassis, which has to be modified during production for the P.O. option.

Engine

- Fit a P.O. type air filter (refer to the table on page 19 for details).
- Insulate petrol pipes in the hotter parts of the under-bonnet area with asbestos to prevent vapour-lock in hot climates.

Gearbox

Fit a collar to positively secure the protective rubber where the gear selector lever enters the gearbox (fig. 1).

Exhaust

Shorten the rear pipe and turn it through 180° to emerge forward of the left rear wheel (fig. 8).

Brakes

Secure the brake pipes to the curved sections of the suspension arms with heavy duty adhesive tape (fig. 2).

Suspension General

- The front and rear inertia dampers are essential for vehicles made prior to 1975.
- Fit a collar to hold the rubber bushes situated at the ends of the suspension pots.
- Secure the locating pins of the linkage with locking wire (fig. 3).

Front suspension

- Reinforce the arms with a fillet welded to the inside of the curve (to be carried out yourself).
- Reinforce the wheel travel limit stops on the suspension arms (fig. 4).
- The knife edge sliding contacts must be in perfect condition.
- The dampers must also be in perfect condition and their securing plate bolts torqued to 25 to 30 lb-ft.

Rear suspension

- Reinforce the wheel travel limit stop (fig. 2).

- Reinforce the limit stop attached to the body (fig 5)

Ground clearance Adjustments

The front and rear ride height should be adjusted to the maximum allowed for the model concerned.

Tyres

The vehicles may be equipped with 125-15 X tyres in the case of the 2CV and Dyane, and 135-15X or 135-15XZX in the case of other models, always fitted with an inner tube.

The 135 section tyres give better performance on sandy surfaces.

Inflation Pressure (measured hot)	Front		Rear		Spare	
	psi	Bar	psi	Bar	psi	Bar
Normal	26	1.8	28	1.9	29	2
Very Hard Going (flints, rocks, potholes)	32	2.2	32	2.2	29	2
Earth, Firm Sand	18	1.2	18	1.2	29	2
Soft Sand	9	0.6	9	0.6	29	2

Note: restore standard front and rear operating pressures as soon as road conditions improve.

Platform

- Reinforce the platform as shown in fig. 7.
- Fit front bumpers and sump shield of P.O. type (refer to table on Page 19).
- Fit a protective flaring under the engine and gearbox, with a tow hitch at the front (fig. 6): you should make this yourself. Ensure that you leave openings for access to the sump drain plug and the engine front mounting bolts.
- Secure the front axle cross member with bolts similar to those used for the rear cross member (these bolt are longer).

Having reached this stage, one can proceed to the reinforcement of the platform chassis (fig. 7).

- For those vehicles (including P.O. versions) built since December 1972, weld into place only the reinforcement A.
- For vehicles built prior to December 1972, weld on reinforcements A, B (place a 5 mm. spacer under the stop) and C.
- For Vans of all types, additionally weld in reinforcement D at the rear.
- Fit a protective under tray beneath the fuel tank (fig.8)
- Remove the rear bumper altogether and fit tow hook (fig.9)

Exterior Fittings

- Fit two long range auxiliary lamps served by electrical relays (fig. 10)
- Protective grilles can be attached to the P.O. type front bumpers to protect these lamps (fig. 11).
- Provide protection for the standard headlamps:
 - in the case of round lamps, grilles must be made (fig. 12),
 - in the case of rectangular lamps, a standard part exists, reference ZC 9866078 U.
- Fit a swivelling police-type spotlight on the left side, above the driver's door (fig. 13).
- This lamp may be replaced by an inspection light.

- To assist in crossing soft sand, fit a rear hand grip of the type used on the Citroën H and three supports for sand mats (fig. 14).
- We advise the use of two mats made of light alloy or plastic.
- Optional: shear off the rear wings (fig. 15).

Interior fittings

Additional Fuel

Depending on your itinerary, you may well have to cover a greater distance between refuelling and replenishment points than your vehicle would normally be capable of achieving.

Do not forget that your fuel consumption is likely to be higher than normal, especially in sand where it could be two or three times greater, and is also as a function of temperature.

We advise you to carry a sufficient number of jerrycans which must be carefully stowed at the time of loading, not forgetting a funnel with a built-in filter.

Once they have served their purpose, you can sell the cans in order to save weight and gain space.

The rescue jerrycan

The previous advice notwithstanding, it is a good idea to prepare one jerrycan as shown on fig. 16 to serve in the event of failure of the main fuel tank.

Pierce the cap of a "US" type jerrycan and solder into place a 6 mm. (1/4 inch) tube passing from one side to the other, together with a 3 mm. venting tube.

Prepare a length of petrol pipe of 6 mm. interior diameter, with a filter at one end.

In case of emergency, attach the petrol pipe to the tube B (note: when in position, the filter should be right at the bottom of the Jerrycan). Put the cap back in place and attach tube A to the fuel line between the tank and the fuel pump with a sleeve.

Auxiliary tank

There is a more sophisticated way of carrying extra fuel which avoids the need to carry heavy, clumsy jerrycans: fit an auxiliary fuel tank.

Any such installation must be carried out with great care. The 2CVs which took part in the Raid Afrique were equipped with auxiliary tanks of 65 litres (14.3 gallons) capacity, taken from the Citroën DS and mounted inside the vehicle, in place of the back seat. This turned out to be an elegant and practical solution. Today, however, DS type fuel tanks are becoming harder and harder to find... Those who, nevertheless, wish to, and are able to equip their 2CVs or Dyanes in this way, can obtain detailed instructions on the necessary procedure from the Public Relations Department at Automobiles Citroën in Paris. Essentially it involves removing the back seat and its attachments, and inserting a three way tap into the fuel line, together with an electrical contents gauge. It is necessary to secure the tank as firmly as possible and to insert felt padding between the tank and the floor to avoid any risk of deterioration.

Other fittings

- Fit a powerful air horn:

This will be extremely useful, however avoid those three or four-note

horns which sound like military bands or police sirens: they serve only to upset every pedestrian in the world, and every user of every road and track.

- Fit a 1 kg (2.2 lb.) fire extinguisher.

Choose a place where the extinguisher can be easily reached, on or near the floor. Strap it securely in place, in such a way that the flexing of the panel cannot work it loose.

- Fit a cigar-lighter

Equipped with an adaptor for use with an inspection lamp, a razor or a camera battery re-charger.

Preparations specific to the Méhari 4x4

The Méhari 4x4 is equipped as standard with certain features which make it particularly suitable for driving across country:

- four-wheel drive;
- low-ratio transfer box;
- rear axle differential lock;
- reinforced cross-country chassis platform;
- reinforced front suspension arms;
- protective shield under engine and gearbox;
- protective shield under the fuel tank;
- five Michelin 135-15 XM + S8 tyres.

The following modifications are drawn from operating experience, especially with the Méhari 4x4 in the 1980 Paris-Dakar Rally, when it was used by the medical teams. All ten vehicles arrived at Dakar without problems, having completed their mission.

- Weld a reinforcing plate onto the front cross member as shown (fig. 17).
- Replace the locating knife-edges of the suspension arms with distance pieces held in place by captive screws with washers.
- The use of 145-15 XZX tyres is recommended for sandy conditions.

Spare parts

(2CV, Dyane, Acadiane, Méhari)

Mechanical

- 1 complete transmission
- 1 fuel pump
- 3 metres of flexible fuel pipe
- 4 fixing bolts for the rear cross-member
- 2 suspension knife-edges
- 4 suspension brackets
- 1 suspension pot
- 1 front suspension tie-rod with yoke
- 1 rear suspension tie-rod with yoke
- 1 rear spring
- 1 fan
- 1 brake disc
- Engine oil
- 3 wheel bolts
- 1 air filter cartridge

Electrical

- 2 sparking plugs
- 1 set of plug leads
- 1 contact-breaker with condenser
- 1 alternator
- 1 voltage regulator
- 1 coil
- 1 set of fuses
- 1 set of spare bulbs
- 1 alternator drive belt

Tyres

- 2 complete spare wheels
- 2 spare tyres
- 6 inner tubes
- 1 repair outfit with patches

<i>If the expedition comprises several vehicles:</i>	3 valve cores
1 right-hand front suspension arm	3 valve caps
1 left-hand front suspension arm	1 valve core extractor
1 front cross member	

Tools

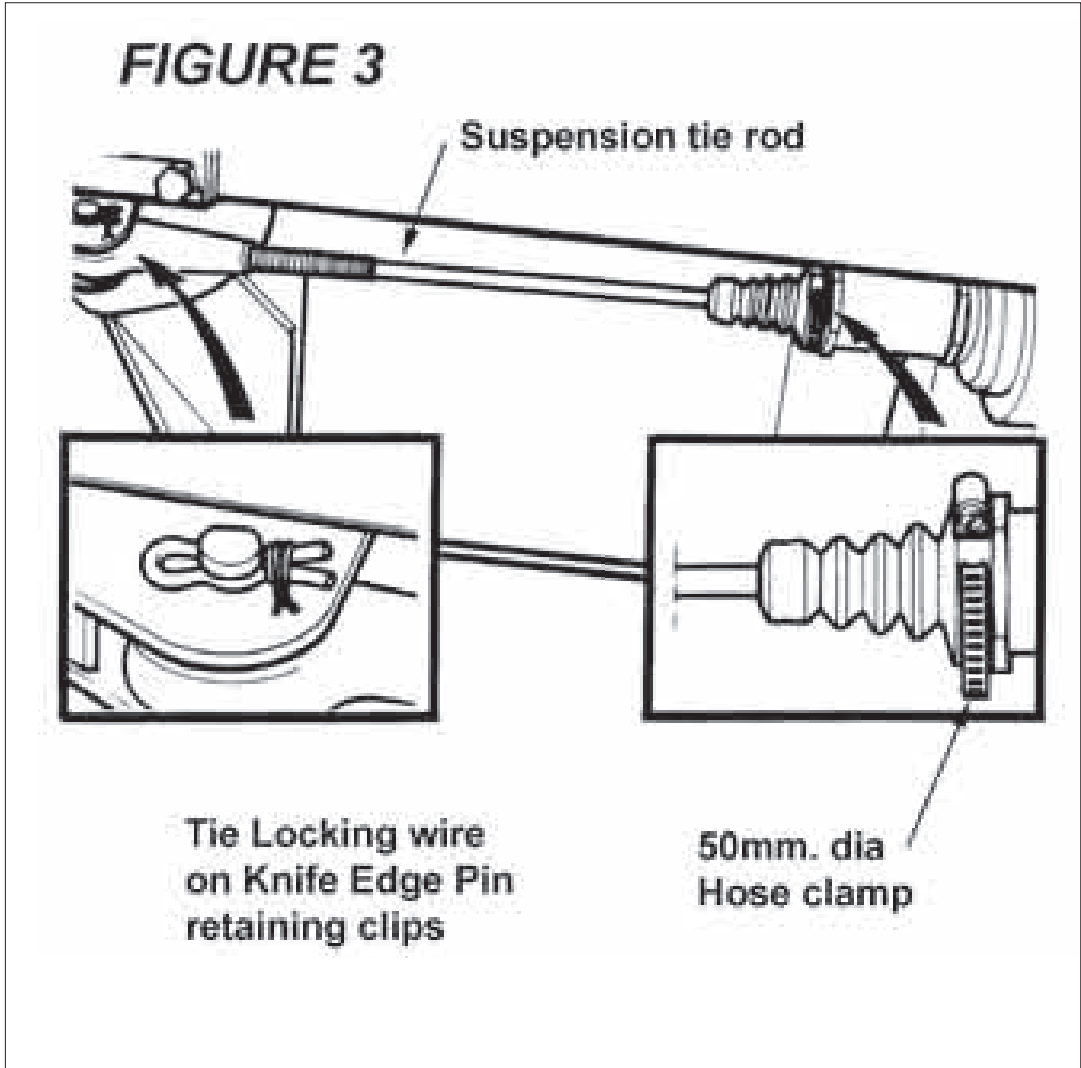
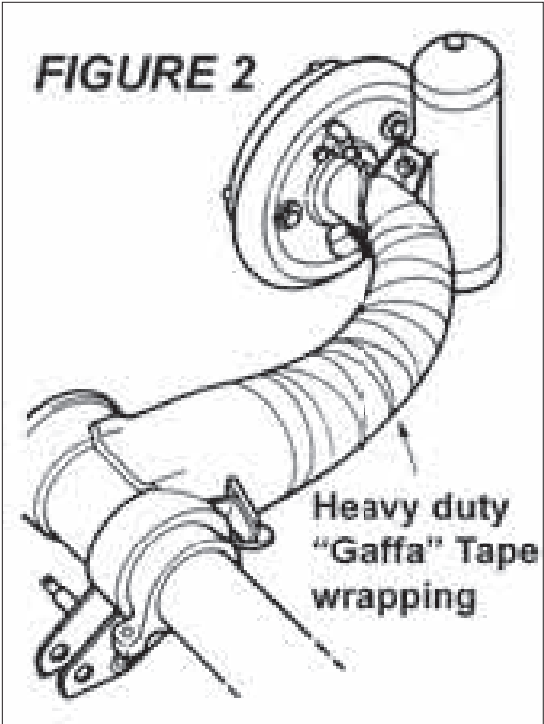
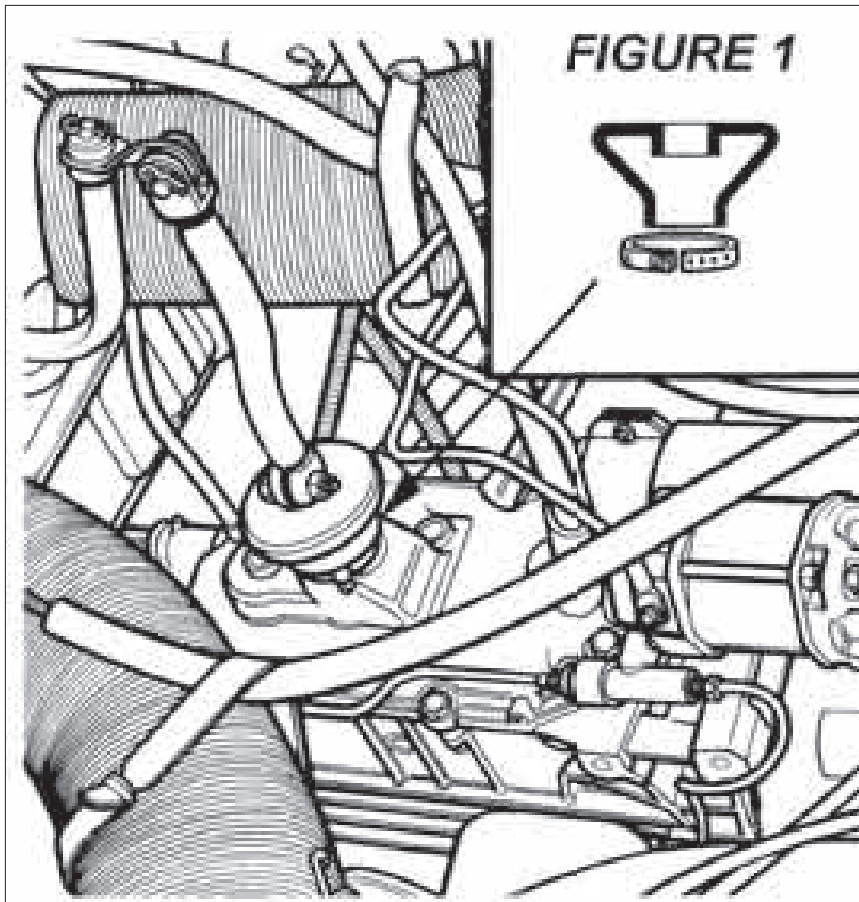
- 1 complete tool kit
- 1 set of tyre levers
- 1 tyre air pump
- 1 pressure gauge
- 1 lightweight nylon tow-rope
- 1 small roll of steel wire
- 1 roll of wide Gaffa tape
- 1 torch with spare batteries
- 1 warning triangle
- 2 sand mats
- 1 lightweight sand shovel

Plus: Revue Technique de l'Automobile (22, rue de la Saussière, 92100 Boulogne-Billancourt, France) or equivalent English-language workshop manual for your chosen vehicle.

Special Citroën modification components

Special part numbers needed for the; 2 CV, Dyane, Acadiane & Méhari

2 CV 6	Complete air filter, type P.0.	5 508 267
	Sump guard	3A 5 411 263 B
	Fuel tank protective under tray	AY 721 122
	Front bumper type P. 0. with under tray	AK 6154 E
	Auxiliary lamp mountings P.0.	7A 5 411 373 X
Dyane 6	Complete air filter, type P.0.	5 508 267
Fourgonnette	Sump guard	3A 5 411 263 B
Acadiane	Fuel tank protective under tray	AY 721 122
	Engine transmission under tray	AY 721 250A
Méhari	Complete air filter, type P.O.	5 508 267
	Sump guard	3A 5 411 263 B
	Fuel tank protective under tray	AY 721 122
	Engine transmission under tray	AY 721 288 A



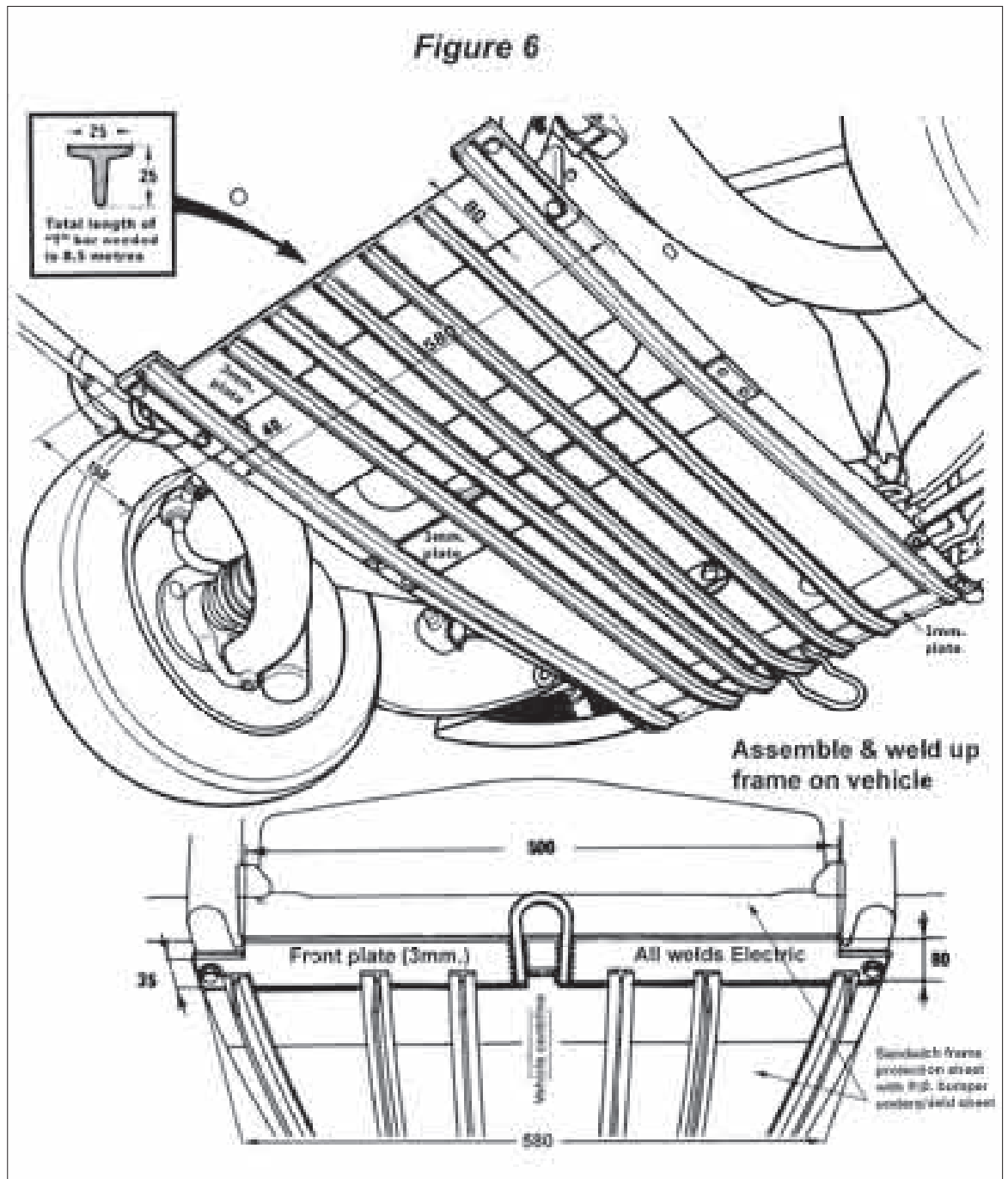
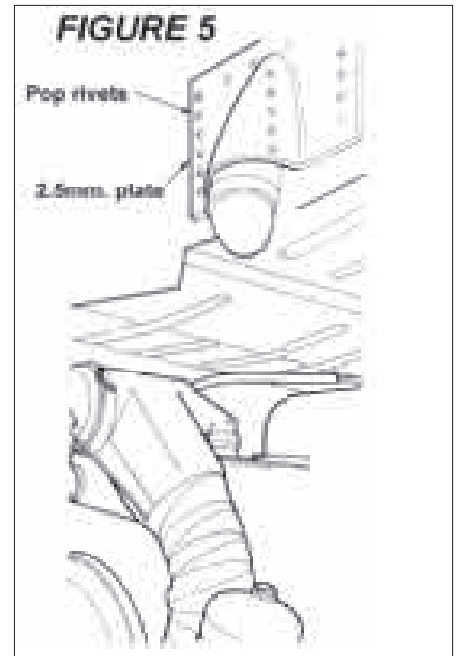
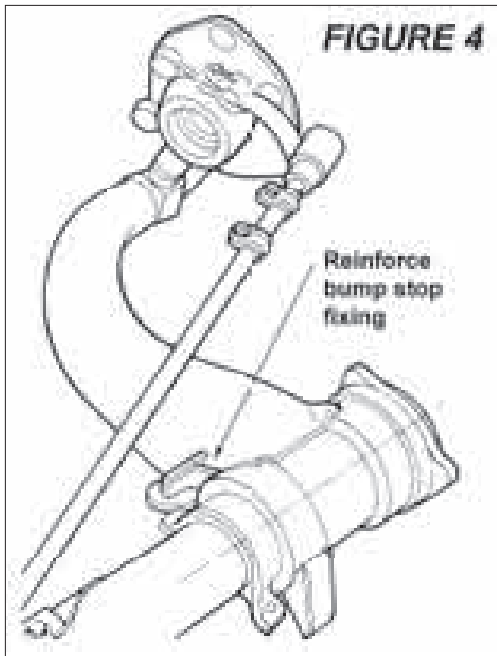


FIGURE 7

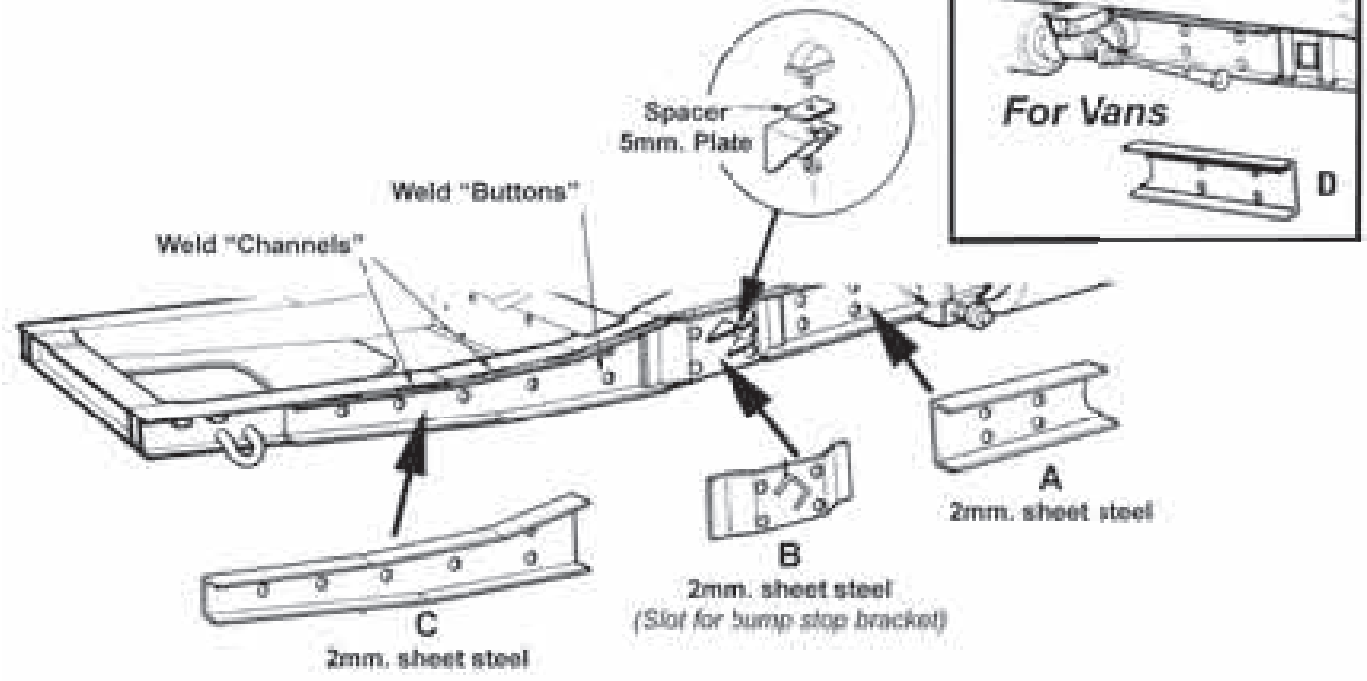


FIGURE 8

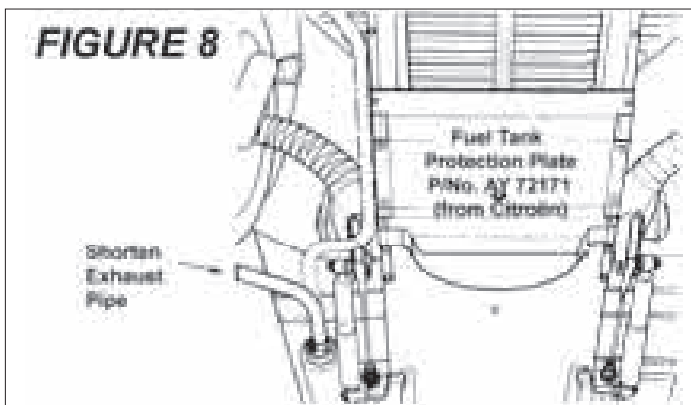


FIGURE 10

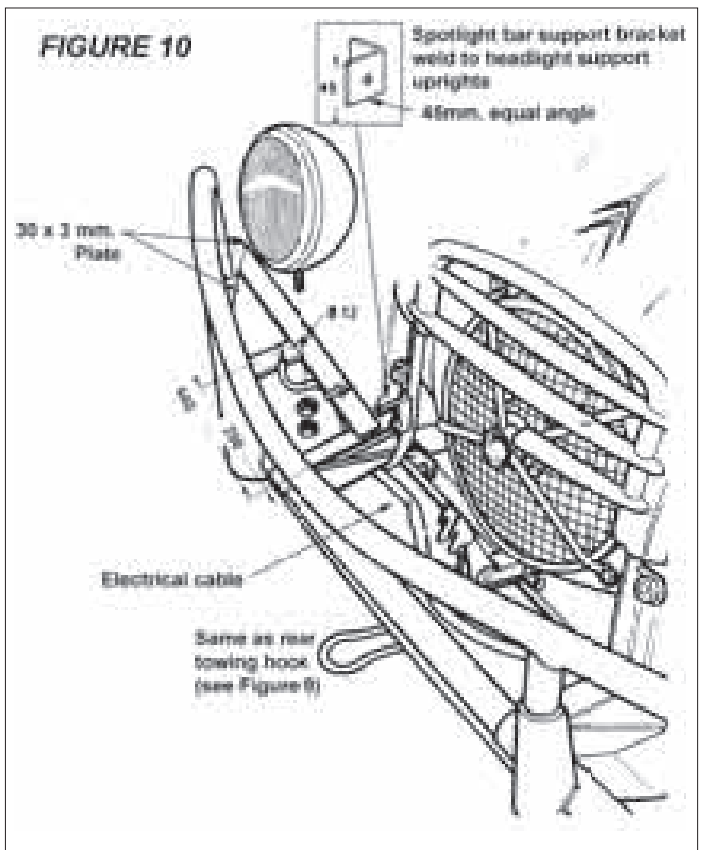
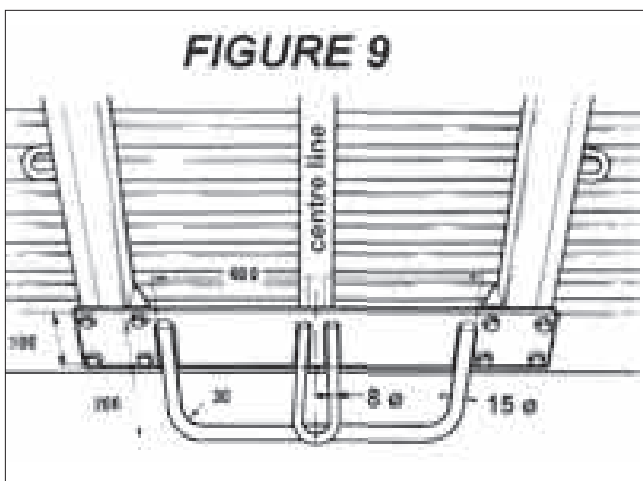
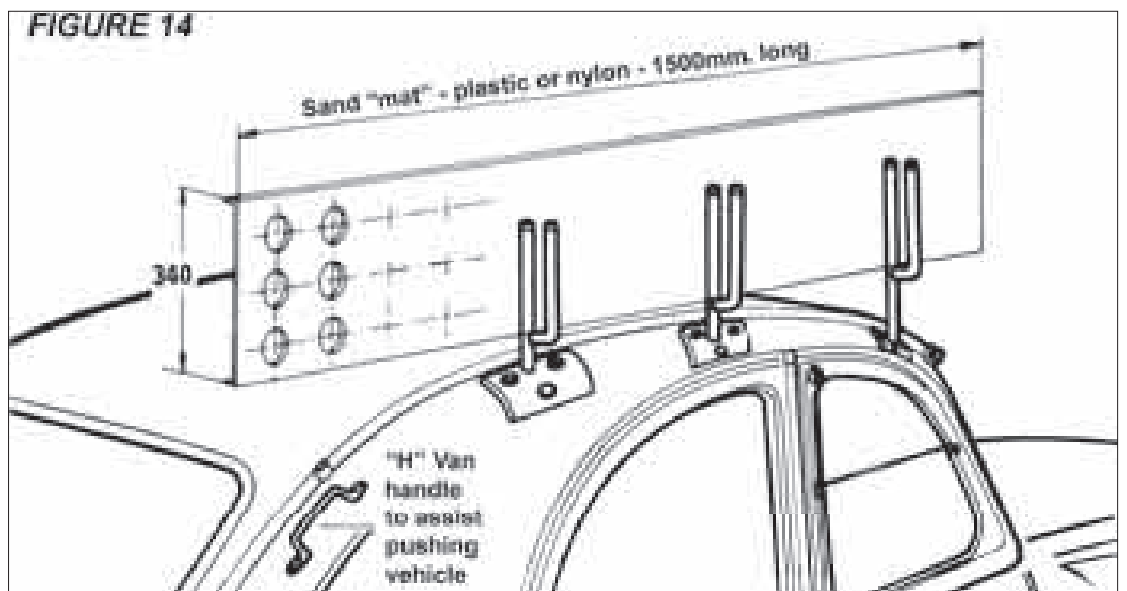
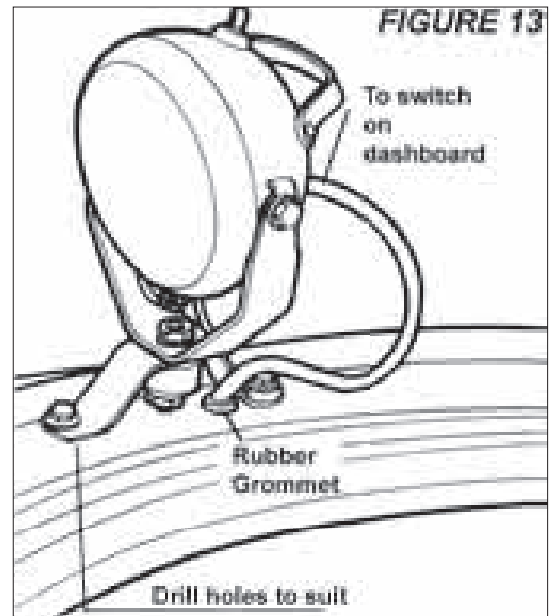
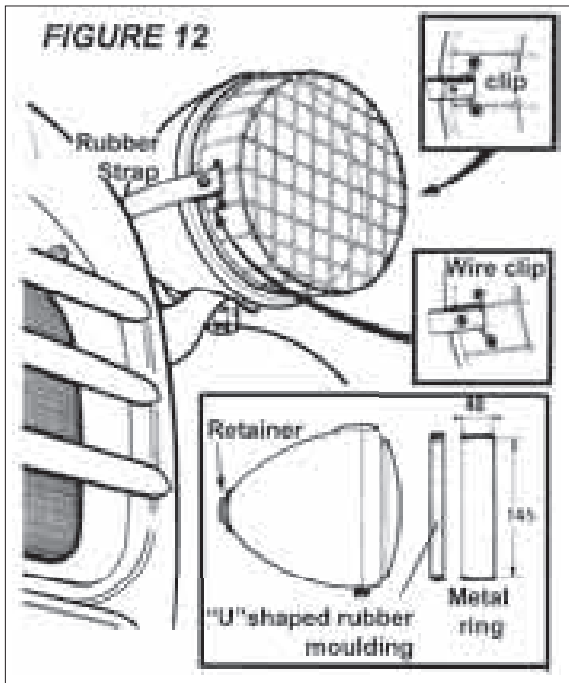
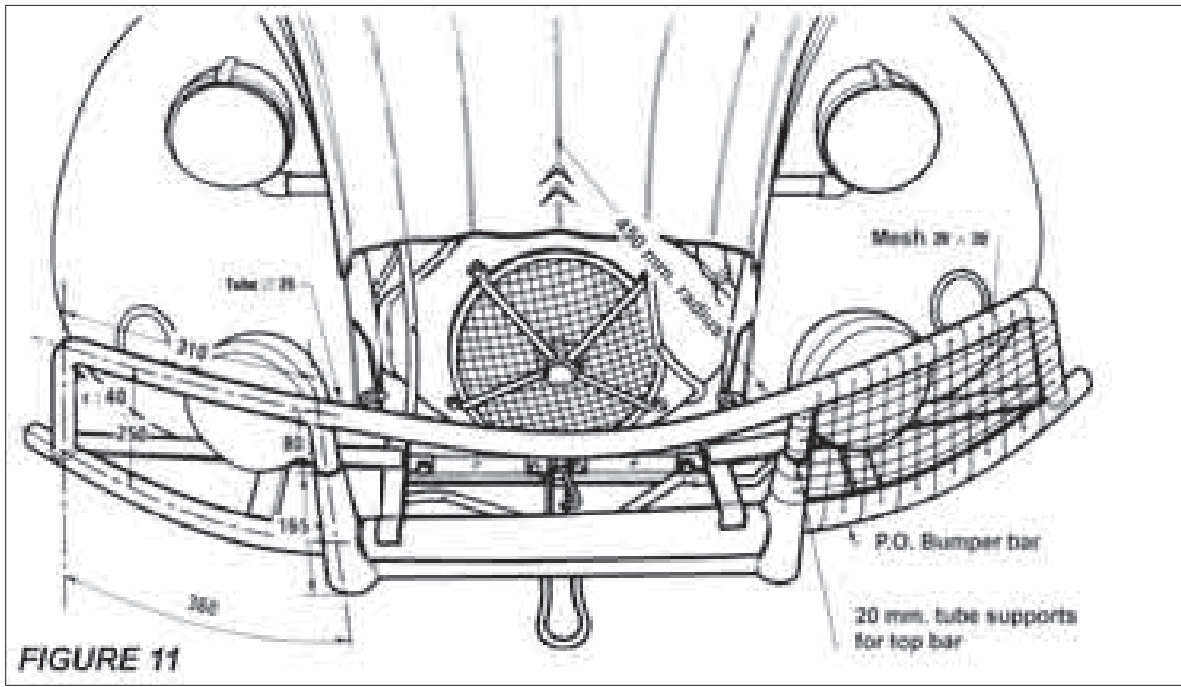


FIGURE 9





II. THE TEAM

“The traveller is still what matters most when travelling”

wrote André Suarès, not without humour.

It is true that successful travelling, whatever the adventures may be, mainly depends on the talent, the capabilities, and even merely on the willingness of those who travel.

A - BEHAVIOUR

YOURSELF

Leaving one's own country often affects one's personality and no one can predict what his or her reactions will be when experiencing a group journey.

No judgment should be made of what another person does, nor should you compare behaviour with your own. Tolerance and an effort towards understanding are the rules to be respected.

Desert country (heat, silence, vastness) has enormous power to alter disposition. The merriest person may suddenly become, without realising it, the saddest; and the nicest, the most quarrelsome.

Imagine your team-mate is driving and gets stuck three or four times in sand or mud in succession, and each time, while pushing and shoving, you curse out loud, saying that you wouldn't have got stuck in this situation!!

We always think we could do better than others. But how will the sand be when you're at the wheel?

The useful space in a car (even a convertible) is very limited. It will be necessary, however, to live in it for approximately ten hours a day, in forced proximity. It is particularly necessary then, that convenient items be shared and you and your team mates chores of tidying up personal belongings and daily camp be similarly shared.

THE OTHERS

In all the countries you will drive through, there is one absolute rule: because the people you will meet are in their own country, it's your duty to respect their way of life. Their culture and traditions may be different from your own.

Respect that difference and avoid shocking them with an unwelcome display of your own prejudices.

Don't compare their habits or customs with those of your own country, try rather to understand them. Don't forget that you have changed countries and continents.

Independence may still be fresh in the history of many countries you visit. As this may be important to them, you should be aware of possible marked sensitivities in this area. It's not for you to judge or give an opinion for which no one has asked; you should rather discover nations that are unknown to you. Seeking to debate or prove something, serves no purpose, except to antagonize people, involving the risk of an incident and the loss of precious time.

Whatever your own personal convictions, don't forget that in the eyes of the inhabitants, you will be representing your country. Some may have a pleasant recollection of your country: don't disappoint them. Others will perhaps keep a certain bitterness which you should refrain

from judging.

Even if the people live wearing little clothing, they will not necessarily understand an untidily or insufficiently dressed European, which they may see it as a provocation.

Your behaviour, beginning with your clothes, must take into account the customs of the country where you find yourself. This is particularly the case for female clothing in Moslem countries. We advise you to be modest and discreet. There is nothing to be gained by shocking.

Would you go to your neighbourhood police station half naked, without having washed for a week? If you did, what kind of a reaction would you expect from the superintendent or from his assistants?

With greater reason, stay within the limits of the law. Penalties, which vary from country to country, may be far more serious than you suspect.

B - FORMALITIES

PERSONAL PAPERS

Before your departure, make enquiries about the necessary formalities of the countries you will driving through.

National Identity Card

In France: fill in an application form at the town hall or police station of your place of residence. Enclose the old identity card or the "ilvret de famille", two recent photographs, and a 105 Franc fiscal stamp (valid 10 years).

In Portugal and Austria: the card is issued by a police station or the prefecture.

In the Netherlands, Belgium, Italy: by the secretary of the town hall and by the office of residence declarations.

In Spain, provide four photographs and a written residence certificate.

In Denmark, Sweden, Great Britain: this identity card does not exist.

In Switzerland: apply either at the prefecture or at the town administration.

Passport

In France: fill in an application for a passport at the town hall or police station of your place of residence. Enclose two recent photographs, your identity card and 335 Franc fiscal stamp (valid 5 years).

In Italy, Norway, Austria, Sweden, Denmark, Great Britain, Portugal, Spain: fill in a form at a police station or at the prefecture, providing some proof of your identity (birth certificate, national identity number and two recent photographs).

In Spain, supply, in addition, a certificate of good conduct issued by the Ministry of Justice, and for those under 38 years of age, a military license.

In the Netherlands and Belgium: application for a passport should be made to the secretary of the town hall in one's place of residence.

In Germany: apply to the office of residence declarations.

In Switzerland: the application should be made either at the prefecture or at the town administration.

International driver's licence

France: attention, this is not the pink, three-fold licence, it's a grey booklet issued by the police prefecture if you live in Paris and by the prefecture or sub-prefecture if you live outside of Paris, upon presentation of the following items: driver's licence, identity card, two recent photographs, a 17 Franc fiscal stamp.

Netherlands, Great Britain, Italy, Norway, Austria, Germany, Portugal, Belgium, Spain: issued by the National Automobile Club- Touring Club, upon written application and presentation of a driver's licence and an identity photograph.

In Denmark: upon presentation of a driver's licence and photograph at a police station.

In Switzerland: issued by the motor vehicle office.

Photographs

In addition to the required documents, it is advisable to take extra identity photographs with you and a blood-type card.

VEHICLE PAPERS

In addition to vehicle papers (registration card for France), many countries require an international customs carnet.

In the various European countries, this carnet is available from the National Automobile Clubs or through motor associations.

In France: either from the Automobile Club de France, 48, place de la Concorde, 75008 Paris, tel.. 266.43.00, or from your Regional Automobile Club. The carnet costs 355 French Francs + 435 French Francs annual subscription (including insurance policy at "Mondial Assistance").

In Great Britain: it is issued by your insurance company.

Caution:

to enter certain countries, a security is required. In general, it amounts to 100% of the value of the vehicle.

INSURANCE

The international motor insurance card (green card) is only valid in a certain number of countries. In any case, check with your insurer to see if the company insuring your vehicle (civil liability) grants coverage in the countries you will be driving through.

In certain countries (e.g. Algeria), it is necessary upon entry to take out an insurance valid for the length of stay or of transit.

It is wise to take out an individual international insurance policy including coverage for:

- the payment of medical expenses in case of accident and
- unexpected customs fees in the event of abandoning your vehicle, as well as a clause
- covering repatriation in an ambulance.

C - PRECAUTIONS

There are many precautions to be taken, beginning with the planning of the journey.

For example: it is unwise to travel alone, it's better to have two people than three, not only for reasons of weight, but also for psychological ones as well. The ideal, of course, is to have four people and two cars.

Others considerations include the arrangement of the vehicle, where each detail counts: a white body lowers the inside temperature by several degrees; baggage or jerrycans on the roof increase fuel consumption, reduce speed, increase wind resistance and throw the car off balance...

Next come precautions to be taken on the spot: under no circumstances are you to bathe in a pond or backwater: you need to avoid bilharziosis, which is not a bad idea; don't drink untreated water; don't walk barefoot or even in light sandals in the bush, etc.

SAFETY

Driving through deserts, in particular the Sahara, is subject to very strict regulations designed only for your safety. You must inquire about such regulations and comply with them.

For example, in the Sahara, you must notify your passage in the main "Dairas". This allows a search to be organised in case persons do not show up at the next station. Many lives have been saved in this way.

MAPS

Generally, use Michelin maps.

For more detailed maps, buy ordnance maps. In France, at the Institut Geographique National, 107, rue de la Boétie, 75008 Paris.

HEALTH

Vaccines

Many countries require vaccinations, and in many countries this precaution is absolutely essential.

Don't forget to get information long before your date of departure from the relevant authorities (Embassy, Consulate, Tourist Bureau, Airlines). In addition to compulsory vaccinations, we recommend, in the interest of safety, a polio vaccine or a booster within the past year, as well as a tetanus vaccination in the past five years.

Attention: the tetanus vaccination must be given in three injections at 14 day intervals.

Smallpox has almost disappeared throughout the world, but certain countries maintain the requirement of a smallpox vaccination.

Validity of common vaccines:

- *Smallpox: more than eight days, less than three years,*
- *Cholera: more than six days, less than six months,*
- *Yellow Fever: more than ten days, less than ten years.*

For cholera and Yellow Fever vaccinations a urine analysis is required.

Sequence of vaccinations (recommended by the Institut Pasteur in France):

- *Yellow Fever vaccination*
- *1st injection, Cholera (12 days later)*
- *2nd injection, Cholera (8 days later)*
- *Smallpox vaccination (5 days later).*

In European countries, the Yellow Fever vaccination can only be given in approved centres (ask local health authorities for information). In France, at the Institut Pasteur or one of its regional centres. Vaccinations for Cholera and Smallpox may be administered by your family doctor. In that case, you must secure a vaccination booklet, either from your chemist, or, in France, at the Arnet bookshop, 2, rue Casimir-Delavigne, 75006 Paris, and then have your doctor's signature legalized at the Direction Départementale de la Santé, 57, boulevard de Sébastopol, 75001 Paris, or at the prefecture of the physicians's place or residence. If vaccinations are given in hospital or at the Institut Pasteur, (25, rue du DocteurRoux, 75015 Paris, tel. 306.19.19), no legalization of signature is required, as these institutions are authorised to establish international vaccination booklets.

In the European countries, the international vaccination booklet is issued by local health authorities or hospital vaccination services, or, in Great Britain, by your doctor.

In Switzerland, the Cantonal Health Office delivers this booklet upon production of a vaccination certificate.

Prevention of Malaria

Before going to countries where there is a risk of malaria, a dose of Flavoquine should be taken fifteen days before departure and repeated every fifteen days until fifteen days after your return; or during the same period take a tablet of Nivaquine daily.

First Aid Kit

All the following contents of a first aid kit should be packed in a metal medicine chest approximately 20 x 15 x 7 cm.

Rather than brightly coloured and dramatic disinfectants or 90% alcohol, which is too volatile, we recommend using a proven product, a bottle of tincture of iodine or iodized alcohol.

To this you should add:

- *1 roll adhesive plaster (5 m. x 2 cm.)*
- *adhesive bandages (large and small) - 1 tube aspirin*
- *Flavoquine or Nivaquine (100 mg.)*
- *medicine for intestinal disorders: Diarsed, Intetrix (Beau four), Ganidan*
- *salt tablets for hot and desert areas*
- *lip balm*
- *Alibour cream very important for regions where there is dust-and where isn't there dust?*
- *for eye inflammations: antiseptic eye drops (ChibioBoraline) and antibiotic eye drops (Neomycine Diamant)*
- *for skin diseases: an antiseptic copper and zinc sulphate cream and a fungicidal cream (Dermocuisse and Tevaryl)*

Instruments

- 1 pair of rounded scissors
- 1 tourniquet
- 1 inflatable splint

Water

In desert regions where existing water sources are scarce and far between, and in case of a catastrophe (prolonged immobilisation of the vehicle, water hole dry etc.), in the warm season, plan a supply of drinking water for a consumption of about 10 litres per person per day as well as a reserve of 5 extra days.

Bring Hydroclorazone tablets for water disinfection.

Katadyn pocket filter: reduces the action of various pathogenic agents, but, although it is easy to use, it requires pumping. The pocket filter produces about one litre of clear, disinfected water per minute. It takes up little room (length 25 cm) and weights 650 g. It provides bacteriologically pure water as long as its ceramic filter element is intact. The life of the element depends on the degree of pollution of the water as the well as frequency of use. For additional information, contact Katadyne France, 24, rue du Château, 94500 Champigny, France.

Micropur: a water-soluble salt, chlorine-free, light resistant, a compound in which silver is fixed. When this salt is dissolved in water, the silver ions are freed and destroy any pathogenic bacteria which may have contaminated the water (disinfection). The excess ions remaining in the water protect it from re contamination (preservation).

To treat small quantities of water: Micropur effervescent tablets sealed in plastic-coated aluminium foil. For larger quantities of water, use Micropur powder, sold in strong paper packets.

Personal hygiene

Contrary to what some people think, complete daily washing is necessary, if for no other reason than the prevention of many skin diseases, against which it provides the best prevention.

In certain hot, dry regions (desert), washing may be done without soap to avoid drying the skin. Give particular care to folds in the skin, armpits, groin, etc.

If need be, a complete "bath" can be taken with very little water by using the Sahara method: in a basin, rinse the hands, then wash the face, then the body, then legs and feet. Finally, use the water to rinse the day's undergarments and to moisten the canteen covers to keep them cool.

D - DRIVING

Motoring conditions in the different countries of these regions require that you adapt your driving to new circumstances.

For example: instead of the premium 98-100 octane petrol you normally use in your car, you may find yourself travelling in a country where you will find only 85-octane petrol. You will consequently have to modify your way of driving: refrain from using high speeds, and accelerate gradually.

TRAFFIC

On the trails, as a general rule, be careful when meeting trucks. They drive at supersonic speeds in the middle of the road to avoid the washboard effect. It's up to you to get out of

the way; weight rules. In any case, they are too heavily loaded most of the time to stop.

When they have passed you, the danger is just as great, because the cloud of dust they leave eliminates visibility for some time.

Be careful as well, especially in Africa, of deep railway crossings, which are unattended and often unmarked. The exposed rails are fond of tyres and rims.

Many herds of all kinds spend their time on trails. While guinea fowl won't do much damage to a car body, the same cannot be said of sheep, cows, or zebras.

Donkeys are another danger. Sounding the horn will not drive them off the road, as their front feet are often hobbled.

Another extremely important point: when passing through small villages in the bush, remember that children, old people, and even adults are not used to cars and don't realise how fast they are moving and how dangerous they can be. Whether people are walking or on a bicycle, they may suddenly decide to cross the track only a few yards ahead of you.

TRAILS

Driving on dirt, sand, or stony trails requires sustained attention over a field of vision covering the distance required to bring the vehicle to a complete halt without sudden deceleration. Although obstacles which stand out are generally relatively easy to avoid, sudden drops or holes aren't.

One strict rule is never to arrive at the obstacle with the wheels locked up: slow down anticipating as much as possible by braking in relation to the nature of the road surface, and release the pedal completely to take on the obstacle with all the suspension elements free and without flattening the car to the ground. But the best solution is to have sufficient speed and reflexes to avoid the hole or the big rock on the track. Bumps and ruts should also be approached without sudden braking; on the contrary, it is well to raise the front end of the car with a short burst of acceleration at the moment of arrival at the obstacle, crossing it diagonally with a quick turn of the wheel when precisely atop it, neither too early nor too late. The aim is to pass over the obstacle one wheel at a time, by a "zig-zag" motion and thus avoid excessive jolting of the car. Of course, the car must be straightened out immediately; if you swerve too wildly, especially on unstable ground, you may lose control. The imperative of "visual" driving must be maintained under all circumstances. Be suspicious of a ford that may conceal a large hole in the middle, which you will have a hard time pulling the car out of. In savanna, be suspicious of high grass as it may hide a stump or a large rock. Based on the same principle of: "the unseen danger is the greatest one", you should never drive at night or in a sandstorm.

WASHBOARD

Washboard is a more or less pronounced rippling of the surface of the ground perpendicular to the direction of travel. It is caused by vehicle traffic after the rainy season combined with the shrinkage of the dried surface layer. Driving on washboard puts a car to a test that one cannot imagine. Nothing withstands it, everything comes unscrewed, and falls out or off. The car appears to be disintegrating.

In order for passengers and vehicle to better sustain its effects, it should be "taken" at a least 60 km/h, a speed which may vary according to the type of vehicle. The aim is to have sufficient speed to allow the tyres to rest only on the crest of the ripples. In this case, the jolts are less severe but the car handles as if on ice.

Warning: you must realise that in these conditions, when emergency stops are called for, the grip on the road is reduced by half and that the vehicle may become unstable at the end of deceleration. Be careful too in these conditions when negotiating corners as skidding due to the loss of grip is more probable.

If you are absolutely forced to slow or stop; in order to start again and regain a speed higher than 60 km/h, you must drive in series of big “S’s” until you regain speed.

SAND

Driving on sand requires even more visual awareness. You must anticipate where the vehicle needs to be steered continuously, while far as possible, maintaining a good constant speed, and avoiding any braking. If you have to stop, you must do it very slowly to avoid getting the car stuck.

Short stretch: take the sand with a maximum of impetus and power.

Long stretch: in this case, the tyres may be deflated down to 1/3 of their normal highway pressure. Often the successful crossing of stretches of sand mainly depends on inflation pressure. But you should know that by deflating your tyres you put them at the mercy of a puncture at the first stone you meet.

As the tyres must be re inflated once back on hard ground (dirt, rocks, gravel), this implies that you are equipped with a pressure gauge and a tyre pump (capable of being set on a sand mat for use on sand).

Moreover, if you have a fast car, you will have to refrain from driving at too great a speed on under-inflated tyres as this will cause them to overheat.

Use the variations in the level of the land to the maximum, while avoiding tracks and deep ruts and inclines in the dunes. Chose places where vegetation is growing, if there is any.

Attention: getting stuck in the sand is always possible and must not under any circumstances be considered a dishonour.

Bearing in mind that getting stuck is almost inevitable, you must not persist in futile efforts of going forward but stop before the vehicle is too deeply buried. “Rocking” between forward and reverse gears should NEVER be entertained; it only bogs down the vehicle even more and makes its extrication more difficult, without mentioning the danger of serious transmission damage. Get out of the car, study the situation, dig it out, put sand mats under the drive wheels (or a sack, branches, etc.) start slowly with someone pushing if possible. In all cases, avoid getting excited, which will result in hasty and disorganised moves that will only make the situation worse.

CONVOY

On unsurfaced roads, keep your “dust distance”. Keep out of the dust from the vehicle in front and maintain constant visibility. This distance is based first on the density of the dust raised by the preceding vehicle and second, on the wind direction.

On long stretches on firm sand (of the Ténéré type), vehicles may spread out several metres on each side of one another to avoid driving in the tracks or the dust raised by the tyres of those ahead.

In this case, the vehicles must follow a line strictly parallel to the track of the lead vehicle.

Never try to take short cuts, which will upset the driving order and frequently leads to getting lost. Many vehicles have become lost because of a dip in the terrain suddenly hiding the convoy from the view they had been keeping in the distance. In such a case it is imperative to follow one's own trail backwards until one finds the trail of the convoy.

Nothing is as deceptive as the contours of the Sahara; a "hamada" that seems perfectly flat is sometimes covered with valleys. In addition, it is very difficult to appraise distance in the desert.

While driving in a convoy, if the first vehicle gets stuck, the next vehicle must not try to pass to show that he is more talented, nor stop close by and risk getting stuck as well. He should stop before the soft zone and on foot explore a possible passage to be taken once the first vehicle is freed.

CAMPING

The vehicle should be parked so as to protect the occupants from the wind during the night.

To provide for changes in wind direction during the night, the sleepers should always set up their cot with their head next to the side of the car or a wheel, to keep the sometimes very chilly breezes from blowing into their sleeping bags.

It is not always essential to use a tent, as pitching it and taking it down are sometimes sources of added and often unnecessary fatigue. Transporting a tent, stakes, etc. is also an added load on the car.

Sleeping on the bare ground is not recommended because of insects, scorpions, snakes, etc., or thorny vegetation.

Under no circumstances should a fire be made near the vehicle.

Driving time in the Sahara: departure at sunrise (equipment loaded, coffee drunk), meal break between 9 and 10 o'clock (45 minutes), end of the day's run about 5 pm., setting up of camp, dinner, bed about 6 or 6:30 pm. One or two rest and re grouping stops will be planned each day and agreed on before departure.

E - EQUIPMENT

The equipment list below is not meant to be complete. It is suggested equipment for expeditions in hot, faraway countries, with nights spent outdoors.

Bedding

- 1 folding cot or a foam pad,*
- 1 down sleeping bag as nights are often cold in the desert,*
- 1 space blanket capable of serving during the days as a sun shelter.*

Various equipment

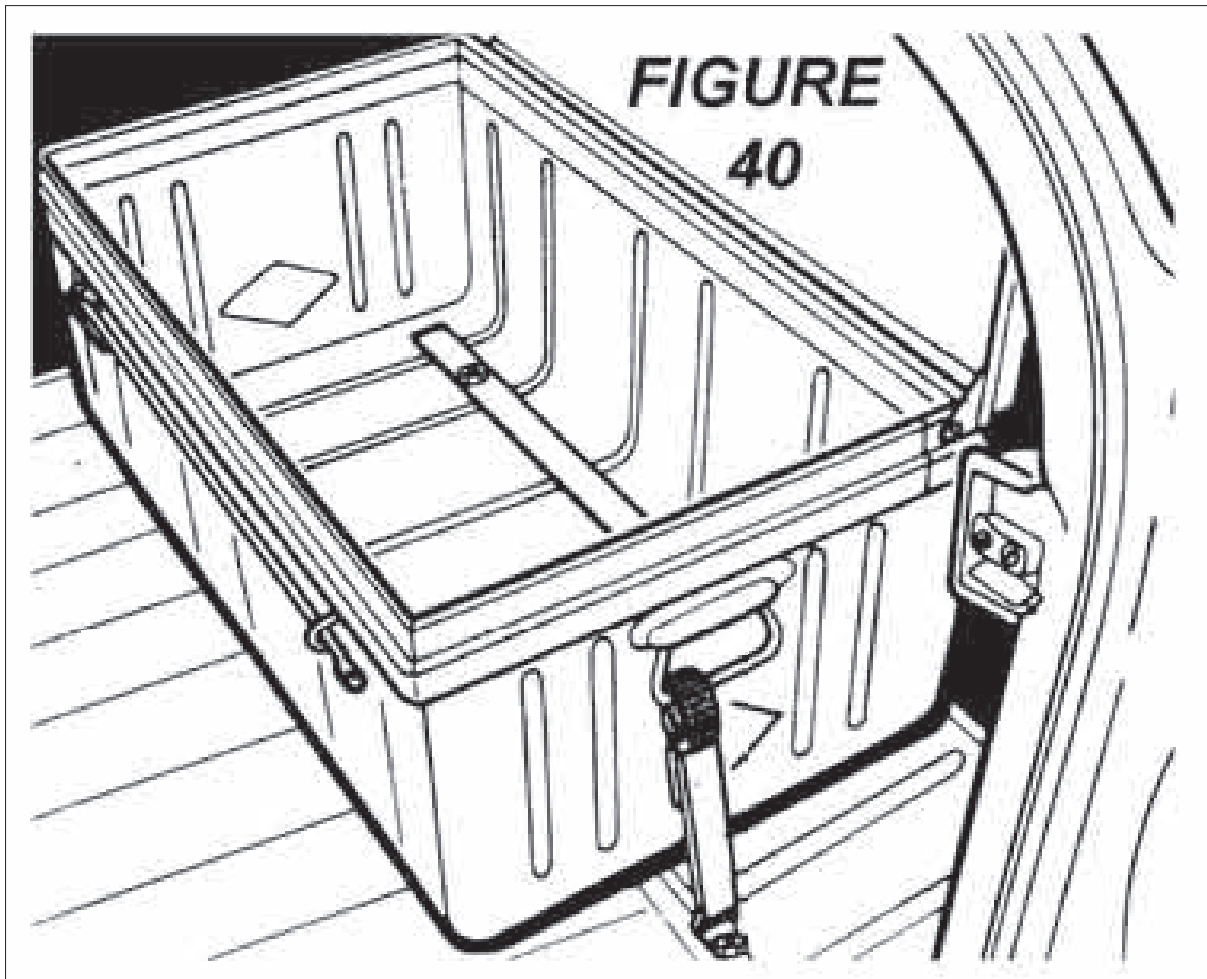
- 1 heavy-duty snow shovel (light and practical for getting out of sand),*
- 10 m of mountaineering rope, diameter 11 mm (can be used for towing),*
- 1 sealed rubber electric torch with international cylindrical 1.5 V batteries,*
- 1 all purpose camp knife with tin and bottle-opener, corkscrew, etc.,*

*1 plastic basin,
2 pairs of goggles with UV protection, number 2 green,
1 pair of high canvas boots ("Palla-rangers"),
Metal canteen with felt cover (may be moistened and hung outside on side mirrors),
1 mosquito net,
1 portable gas stove (camping gas),
1 set of saucepans that nest inside each other,
1 washing up liquid.*

You're not going off to war: don't encumber yourself with a weapon; it will be of no use whatsoever. In the event you might have the absurd idea of bringing one along, it may only get you into a lot of trouble at border crossings.

However, if possible take with you, a "Polaroid" type camera and films. You will be able to offer "snapshots" to those whom you will meet at the crossroads of adventure and this will be for you like a passport for friendship.

For transporting your equipment in convertible cars like the 2CV, removal of the back seat and the fastening in its place a metal chest, locked with two padlocks is recommended. The chest should be bolted to the frame of the car in such a way it cannot be removed without being opened (figure 40).



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