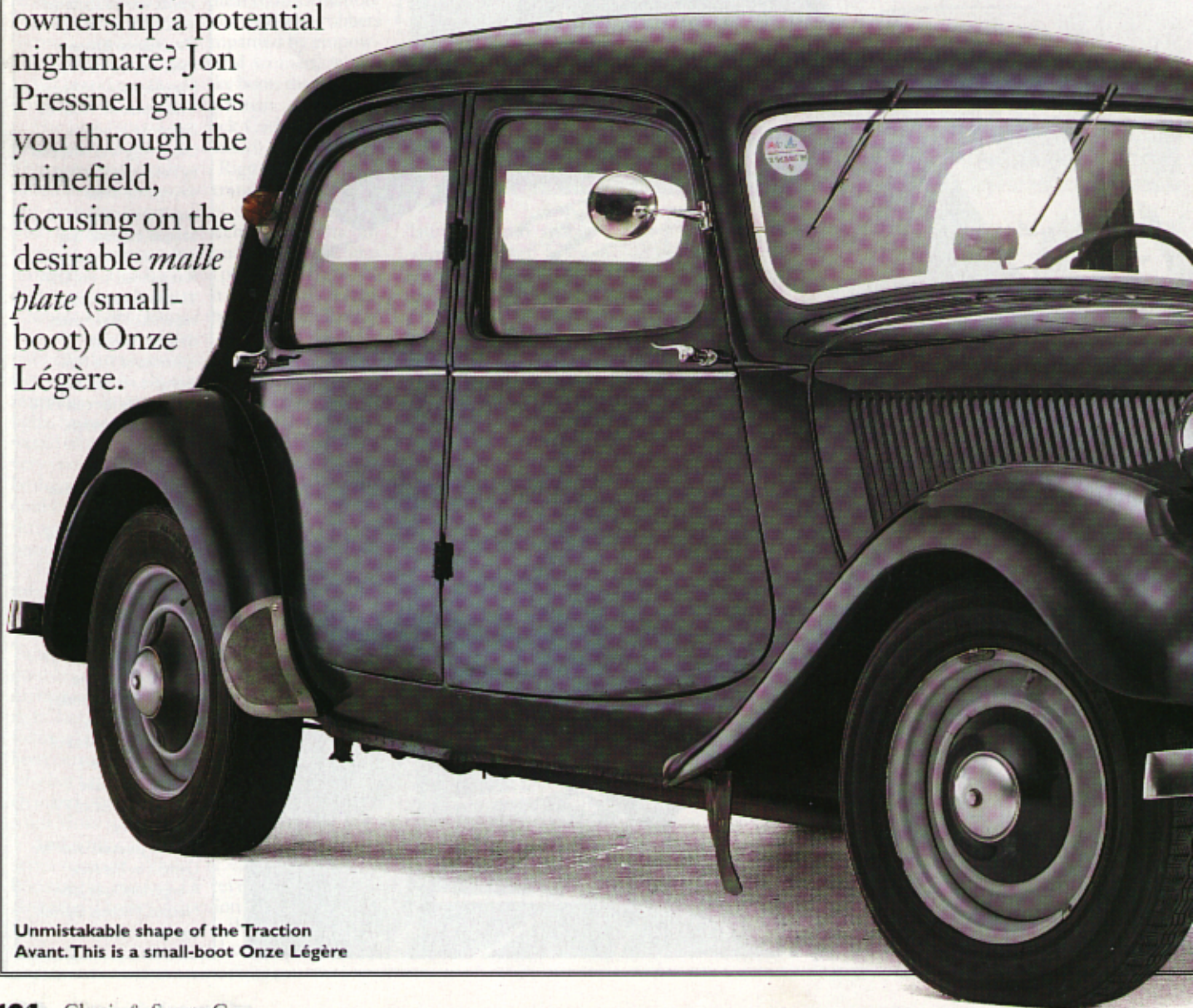


Citroën Traction Avant

Advanced front-wheel-drive engineering, gorgeous looks, modest prices and an excellent club – the 1934-'57 Citroën Traction Avant seems as if it has it all. Built in England as well as in France, it is a technological landmark with monocoque construction, independent torsion-bar front suspension and torsion-bar-sprung rear axle, plus rack-and-pinion steering from 1936 and hydraulic brakes. But despite the car's reputation for ruggedness, is ownership a potential nightmare? Jon Pressnell guides you through the minefield, focusing on the desirable *malle plate* (small-boot) Onze Légère.



Unmistakable shape of the Traction Avant. This is a small-boot Onze Légère

Owners' views

Tony Latchford, a Ford employee and owner of our featured 1951 IBL, cut his motoring teeth as a 2CV driver, so when he decided to buy an older classic the Traction Avant was a natural choice. It had to be a French-built car, though – in the rhd Slough Traction that they tried his wife had the seat so far forward that one knee was in contact with the handbrake, which was hardly a reassuring thought in the event of an accident.

"I wanted a pre-'53 model," he says, "because I like the small boot and the less bare dashboard, while the Légère was a nice size for the driveway and is the prettiest of the range, with everything in proportion. I'd be tempted by a Normale, as there's extra space inside for when we go camping."

Tony paid £6000 for his car in 1994, complete with modifications to the pedals, floorpan and gearlever that had allowed the first owner, a tin-legged ex-Resistance fighter, to drive it: "It makes sense to go for the best one you can afford. Some seemingly OK cars could end up costing you double the purchase price by the time you've brought them up to scratch." The Latchfords cover about 5000 miles a year in the Citroën, taking it abroad up to four times a year, often on inter-club events. The only dramas have been stripping the differential teeth twice.

"I used to drive stock cars and I tend to be a bit lead-footed and try to keep up with modern traffic. If you drive it like a modern car it doesn't like it. But I'm not frightened by the mechanicals. They're so simple, once you've played with them for a while. The TOC has an excellent spares section and is very useful, and I have a friend in the club who has all the special tools, so we do the more difficult work together."

Rik Blote restored his 1938 Onze Légère in a lightning nine months, a new front floor and patch repairs to the boot floor and the *jambonneaux* being the main body requirements: "It's not a structurally complex vehicle, and the quality of the nuts and bolts meant that things just came undone. In comparison an E-type I restored was an absolute nightmare. The trim was straightforward, and I did that myself. A mistake was to buy repro chrome bumpers. I've now bought some British-made stainless ones, which are very good."

Since restoring the Citroën, Rik has fitted CV joints and a transmission rebuilt by Roger Williams with a higher-ratio final drive, plus a diaphragm clutch conversion with a lightened flywheel: "The original clutch was like a tractor's but in traffic it's now much more like a modern car – Roger's a brilliant guy, and the work he did on the 'box is wonderful." Rik has no qualms about using the car: "There are so many around and you can get parts easily, so you park it where you want, and don't have to worry about dings or wearing things out. The only real problem is that the 6-volt electrics mean the lights aren't very bright for night driving."



"Some seemingly OK cars could end up costing you, double the purchase price"



THE CLUBS

The lively and broad-based **Citroën Car Club** (Derek Pearson, 01 689 853999) caters for the Traction Avant, but the club which is truly home to the cars is the **Traction Owners' Club**. As well as a strong social calendar and an award-winning magazine it offers access to technically well-informed members who can help when buying a car and to identify trustworthy parts sources. The club has its own spares operation and loan scheme for tools. Contact Peter Riggs, 2 Appleby Gardens, Dunstable, Beds LU6 3DB.

SPECIALISTS

Philippe Chauvet France, 0033 1 64 25 47 01; **MRS: M Chollet** France, 0033 5 56 32 97 29; **T: Classic Restorations** London, 0171 928 6613; **MPRST: Depanoto** France, 0033 2 37 52 43 25; **P: ENPI** France, 0033 1 60 02 07 24; **T: JP Ichard** Laroque, France, 0033 5 61 01 81 42; **P: Néo Retro** France, 0033 5 55 48 38 58; **P: Garage J Pauly** France, 0033 5 53 57 09 48; **MR: Peacock Engineering** Loughborough, 01509 842560; body panels: **Claude Renel**, France, 0033 4 74 45 15 64; **P: Southbound Motor Trimmers** Stockbridge, 01264 810080; **T: Traction Renaissance Services** Stroud, 01453 883935; **MRST: Roger Williams** Beverley, 01482 863344; **M:**

Key: M – Mechanical work, P – Parts, R – Restoration, S – Sales, T – Trimming





Body, style and interior

The combination of being a Citroën and being a very early monocoque might suggest possibilities of terminal rot. In fact, the Traction is rather less prone to corrosion than many later and supposedly simpler cars.

Sills, floors, door and wing bottoms are as vulnerable as on any aged vehicle. But the only structural peculiarity of the Traction Avant which may cause trouble is if the forward extensions of the body tub either side of the engine bay are seriously rusted. If the rust on these ham-shaped box sections – called *jambonneaux* – is at their forward extremities repair can be a challenge: fortunately refabricating the rear-most reaches is usually all that is required, and this is less of a hassle.

Although there are some real horrors among restoration-project cars, it is possible to find – at least in France – cars which need little or no welding. Think carefully before buying a cheap wreck to restore: you are almost certain to be better off buying a sound runner or even a fully-restored vehicle. French-sourced cars, even if structurally sound, are often spoiled by poor paint – typically suffering from orange peel and from



Interior of the French cars is very austere

the wing beading being painted over.

Repair sections and repro panels are available for all parts of a Traction likely to need them. Be aware, though, that much of the stuff available in France can be of poor quality. Fortunately English specialist Peacock Engineering offers a full range of high-quality panels.

"My bits are expensive because I guarantee their fit and put a lot of effort into getting them right," says Mick Peacock.

As for trim, this is simple and austere on French Tractions – with the exception of the velour-trimmed 15-Six. Door trim panels, carpet kits, headlinings and seat covers are available through French specialists and their British outlets, and DIY retrimming is a genuine possibility. Slough-built cars are a different matter, having leather seats and more elaborate trim. All the same, brave amateurs might want to pitch in. Alternatively Southbound Motor Trimmers specialises in retrimming the British cars.

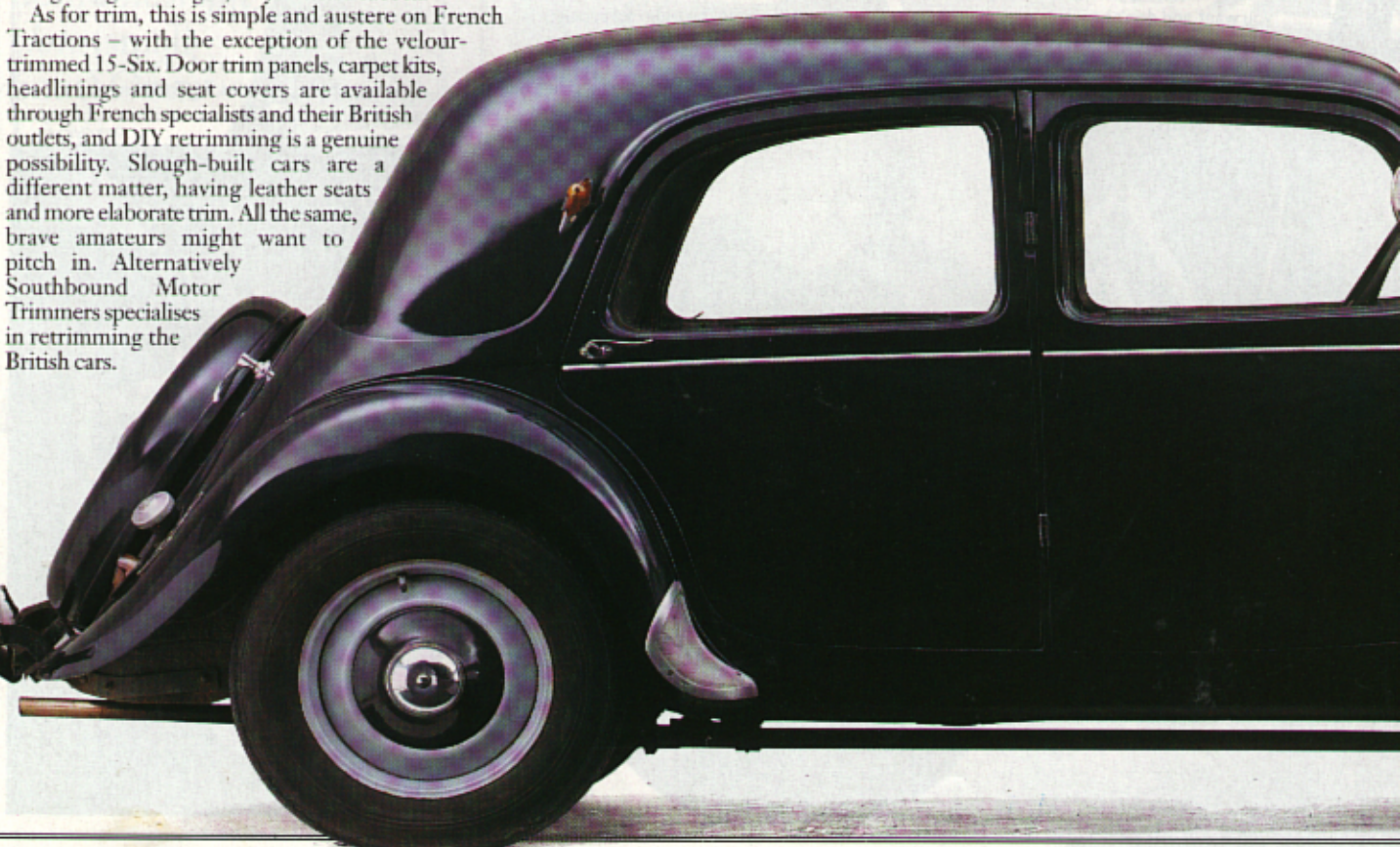


Interior is simple enough for home trimming; materials available

Aluminium stoneguards can hide corroded wing ends, especially on the front wings. Repair sections are available. The wing flanges where the wings bolt to the body may rot if water has been prevented from draining away. Suspect painted-over wing beading. Door bottoms rust, as do the inner door panels.

Jambonneaux are relatively easy to repair close to body, despite being triple-skinned, but near the front suspension there is less room to work, and a lot of dismantling is required. The front suspension cradle has to be removed, and alignment during repair has to be spot-on, or else the cradle won't fit back. Fortunately, not least as it is difficult to see, rust at the front of *jambonneaux* is rare.

The absence of any seal for the bottom of the bootlid on *male plate* models allows water to enter. If the rear boot trough has blocked drainholes, it will then rot out. The boot hinges are attached to the trough, so can be sketchily connected to a weakened panel. The bottom of the bootlid can rot, too. None of these problems applies to the 'big boot' models. On all models the bolt-on rear valance can rust.





BEST BOOKS

If you can cope with a French text, **Le Grand Livre de la Traction Avant** (EPA, 290Ff) by Olivier de Serres is weighty, thorough and trustworthy. Order through La Boutique du Collectionneur, on 0033 1 60 72 01 05; fax: 0033 1 60 72 34 07. Otherwise, a good slim guide is **Classic Citroëns Volume I - Traction Avant 1934-'57** by James Taylor (Yesteryear Books, recently reduced to £7.99). Support either of these with the Brooklands Books **Citroën Traction Avant Gold Portfolio** (£13.95), which is a superb compilation stuffed with contemporary articles from British magazines and thus vital to those interested in the Slough-built cars. For fascinating insights into the man behind the Traction Avant's lines, **Flaminio Bertoni, 30 ans de style Citroën** by Fabien Sabatès (ETAI, 295Ff) is a lavishly illustrated and absorbing account of multi-talented Italian-born Bertoni's life. Again, La Boutique du Collectionneur in Paris can supply this title.

Poorly aligned wings and radiator cowl are not necessarily a sign of accident damage: plenty of built-in adjustment to grille and wing mountings means lots of scope for not getting it right. Ripples in the jambonneaux are a surer sign of a previous accident. Another giveaway (1949 models excepted) is ovalisation of the circular drainholes at either side of the bulkhead at the top of the engine bay.

Bad rust in the sills and floors can cause structural deformation: look for ripples in the roof and cracks in the bulkhead at the bottom of the 'screen pillars, by the horizontal joint. On the 11B and 15-Six, the body can crack in the corner of the rear seatpan, at the back of rear door thresholds, at waist level on the rear face of the back door aperture, and on the rear panel above the boot opening.

On Slough cars fitted with a sliding roof, blocked drain tubes cause water to sit, and rot through the roof channels, while perished rubber drain tubes can divert water to the windscreen pillars, causing rot here.

The outer sills are most likely to be rotten at their forward ends, where they curve in towards the centre of the car: repair is relatively straightforward. Poorly fitting doors, binding at the corners, suggest weak sills are causing the body to sag. Watch too for new sills welded over old ones, and for sills which are anything other than gracefully curved. Slough cars are more prone to sill rot, owing to water ingress via the centre-pillar trafficator slots.



Clockwise from above: **Commerciale**; **1935 11 CV Cabriolet**; **Coupé or Faux-Cabriolet**

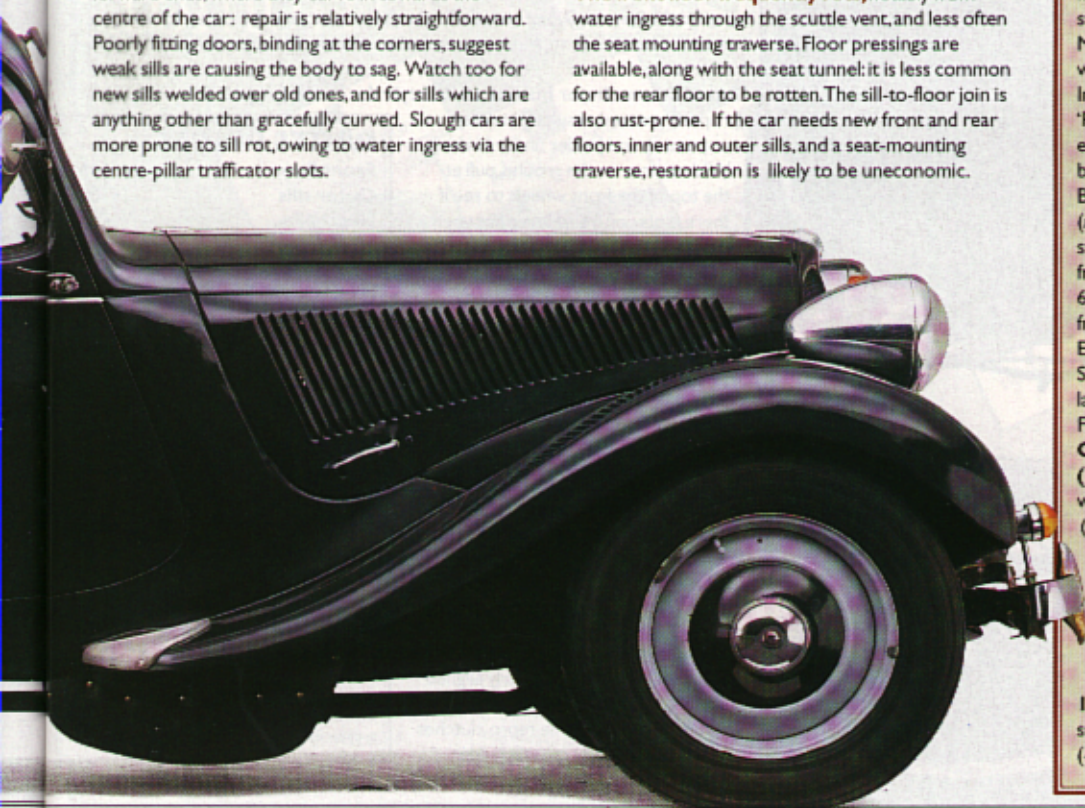
The front floor frequently rots, notably from water ingress through the scuttle vent, and less often the seat mounting traverse. Floor pressings are available, along with the seat tunnel: it is less common for the rear floor to be rotten. The sill-to-floor join is also rust-prone. If the car needs new front and rear floors, inner and outer sills, and a seat-mounting traverse, restoration is likely to be uneconomic.

WHICH BODY STYLE?

Berline: saloon, available as Légère or bigger Normale; latter not offered as Sept.
Familiale: long-wheelbase six-light. As 11 CV, available 1934-'39 and 1953-'57; as 15-Six (never 15H) 1939 and 1953-'55.
Commerciale: Familiale body with hatchback. 11 CV only; model currency as Familiale.
Conduite Intérieure 5-places: Familiale without jump seats. Pre-war only.
Cabriolet: two-seater roadster with dickey seat. Available as Sept, and in 11 CV form as small-bodied Légère and big-bodied Normale. Not sold post-war, and never offered as a 15-Six, although some prototypes made.
Faux-Cabriolet: hardtop coupé version of Cabriolet; discontinued during 1938. Four-cylinder Sept and Onze only.

WHICH IS WHICH?

Sept (7C): pre-war 1628cc model (below). Earlier 1303cc 7A (May-June 1934) and 1529cc 7B (June-October 1934) near extinct. English name: Super Modern Twelve, latterly Twelve.
Onze Légère (11BL): 1911cc engine in Sept body; BL identification only from 1937, earlier cars retrospectively known as 11AL. As with 7C, opening boot from '35 and rack steering during '36. Michelin Pilote wheels 1938-'39. Improved 56bhp 'Perfo' engine from early '39; louvred bonnet post-war. Built-out boot (malle bombée) and straight bumpers from July 1952; 60bhp '11D' engine from May 1955. English name: Sports Twelve, latterly Light Fifteen.
Onze Normale (11B): longer, wider, heavier Onze (middle); B from 1937. Evolution as Onze Légère, and made until July 1957. English name: Fifteen, latterly Big Fifteen.
15-Six: Onze Normale with reinforced body and 2867cc six-cylinder engine (76bhp), 1938-'56. English name: Citroën Six.
15-H: 15-Six with hydropneumatic rear suspension, 1954-'56 (middle). English name: Six (-Cylinder) Hydropneumatic.





Technical & mechanics

Relative to a '30s British mid-ranger such as a Morris Twelve, a Traction Avant is a complicated car. And its first-generation front-wheel-drive componentry has frailties which almost always need money to resolve.

Fortunately, parts availability is excellent, although the quality of many French-supplied components is hair-raisingly variable. Beyond this, thanks to the extraordinary efforts of engineer and dedicated *Tractioniste* Roger Williams, it is possible to update your Traction to eliminate its principal design weaknesses and make it a more agreeable car for everyday use.

The most publicised failing of the Traction is the short life of its driveshaft couplings, which are double Hookes at the hub end and single Hookes at the gearbox. The outer universals can have a distressingly short life, and the inners can be even more short-lived.

The best long-term solution is to fit re-engineered driveshafts with a modern constant-velocity joint outboard and an improved installation using a modern Hardy-Spicer inboard: you'll get longer life, eliminate snatch on full lock, and be able to adjust the steering end-stops to allow a tighter turning circle, thanks to CVs being able to operate at a tighter angle.

Gearbox failure is another Traction affliction, most notably with wear in the weakly fixed final drive leading to expensive auto-destruction of the entire transmission. For £650, Williams will rebuild your transmission; for a further £176 he will fit an additional bearing and oil seal to give better support to the final drive.

You will still have the handicap of a three-speed gearbox, the most irritating consequence of which is that the engine is turning at relatively high revolutions in top. A simple remedy is to replace the crownwheel-and-pinion assembly with a higher-ratio gearset, available from Roger Williams at £470, including a new speedo pinion, which transforms the car.

More radical is to fit a four-speed DS/ID gearbox. French specialist Philippe Chauvet offers an easy-fit conversion, priced at 13,000FF (approx £1450) plus the cost of the gearbox. Roger Williams sells a bolt-in ID/DS engine and gearbox conversion kit (66-83bhp) for approximately £1760, and you'll need to budget upwards of £500 for a 1911cc DS/ID drivetrain.

Conversion to a modern diaphragm clutch, allied to a suitably lightened flywheel, gives a much lighter pedal action, with the less heavy flywheel making the Citroën's 'big four' more responsive. And there's an engine oil filter on offer too.



TECHNICAL PROBLEMS

Wet-liner ohv engines (1911cc for Onze) are robust. The later 11D engine has shell big ends, so is often substituted for earlier units: earlier engines can be converted to shells. Water pumps, especially on early cars, are prone to leakage, which can result in water entering the clutch, causing it to stick. On the 15-Six, the cooling system is marginal, the exhaust manifold prone to splitting and the crankshaft damper to coming loose. A noise similar to big-end rattle, at idle, indicates the latter.



Engine is robust but water pumps can leak

Outer driveshaft universals shouldn't be noisy. If they click at low speed on full lock, they are worn: they will creak if dry. Confirm your suspicions by grasping both ends of the shaft and attempting to twist in opposite directions: a pipe-wrench helps. Inner cardans also wear badly, a drumming sound while driving being an indication of problems: check for the bearing cups spinning in their housings and for loose-fitting splines, as well as for the driveshaft being loose where it is bolted to the flange of the transmission output shaft. The 15-Six has a pot-like rubber 'Bibax' damper on each driveshaft. Poor power take-up, judder and a smell of burnt rubber indicate these are disintegrating: exchange units are available.

The transmission of four-cylinder cars can be frail and, unless it has been properly rebuilt, problems can be expected. Synchromesh can fail, and the car may also jump out of gear. Wear in the differential mounting stresses the pinion and can pull the teeth out of mesh: this can result in a tooth breaking, jamming the cwp, and the gearbox case then splitting. You may also encounter transmissions wrecked by a crownwheel mounting bolt having stretched, broken, and dropped into the gears.

A whining growl from the transmission indicates a problem. Put the car in gear, jack up the front and twist the road wheels to see how much slop there is in the final drive. Alternatively, manipulate the output shaft to check for excessive backlash. Six-cylinder cars have a more robust transmission.

Stiffness and creaking in rack-and-pinion steering suggests water has entered the lower balljoint swivels. To check for wear, jack the car up by each bottom suspension arm, and try to rock the wheel from top to bottom.

Top wishbone inner bushes on four-cylinder cars wear quickly if not properly greased, resulting in noisy suspension and judder under braking. With the car on the ground, pull at the top of the front wheels to see if there is play, or try to lever between the inner hull and the end of the wishbone. Confirm by giving a sharp rearwards kick to the front tyres: a 'clack' indicates worn bushes. Silentbloc bushing eliminates this on the 15-Six.

The four substantial Silentbloc bushes used at the front in the mounting of the lower suspension arms and torsion bars may need replacing: judder under braking is again a possible sign of this problem. Check that the rubber is in good condition (on the outer bushes the central bolt should be properly central in the bush).

Juddering on power take-up may be a disintegrating or poorly aligned rear engine mount rather than a clutch problem. Some repro clutches are of poor quality, causing judder.

PARTS PRICES

Front floor	£46
Outer sills	£100
Door skin	£60
Clutch disc	£60
Outer driveshaft, new	£200
Outer driveshaft, exchange	£60
Inner driveshaft	£80
Inner driveshaft, exchange	£30
Steering balljoints (set)	£70
Lower swivel	£70
Upper wishbone pivots	£80
Front cradle Silentblocs	£100
Set of pistons & liners	£250
Master cylinder	£30
Damper (telescopic)	£34
Bumper blade	£70
Water pump repair kit	£60
Wiring loom	£140
Petrol tank (big boot)	£240
Door panels, trimmed (set)	£120

All prices (tax-inclusive) are guide only; costs and quality vary greatly from supplier to supplier. Panel prices from Peacock Engineering.



Market view

The Traction Avant was made in many forms, but most of those you'll find will be post-war 11CV models: either the 11BL Onze Légère (Light Fifteen in its British-built incarnation) or the 11B Onze Normale (Big Fifteen in Slough-speak), plus a few of the rarer and more costly long-wheelbase Commerciale and Familiale models. Expect to pay more for pre-1953 models with dipped bumpers (*pare-chocs moustaches*) and small boot (*malle plate*).

Pre-war models are scarce and command a premium on account of their rarity and because of opening vents (rather than louvres) on the bonnet sides and – for 1938 and 1939 only – stylish Pilote wheels.

'For the Cabriolets and Faux-Cabriolet coupés you're talking extreme rarity (they were only made pre-war, never in large numbers) and high prices'



Hinged windscreen is great pre-war touch

The six-cylinder 15-Six's relative scarcity and desirability means that – at least in France – it's worth about double an 11CV. Those wanting the ultimate in 15-Sixes are drawn to the 15-H with its hydropneumatic rear suspension. There's a premium of up to £3500 on this coveted

model. Even so, you may still have to stump up more for one of the few surviving – and orthodoxly suspended – post-war 15-Six Familiales.

For the Cabriolets and Faux-Cabriolet coupés you're talking extreme rarity (they were only made pre-war, and never in large numbers) and high prices. Many Cabriolets are modern recreations and there is only one genuine 15-Six Cabrio known. Complete cabrio bodies, with all the trimmings, are available for approximately £10,000 from Peacock Engineering.

Slough-built cars can be found in the small ads in the TOC magazine. Prices tend to be higher than for Parisian cars. An 11CV is on average a good £1000 less in France than in England.



WHAT TO PAY

£1000-£1500

Cheap French-sourced restoration projects.

£1500-£2000

Better French-sourced restoration projects, possibly in unspoilt original condition, and perhaps even running with French MoT; British restoration projects.

£2000-£3000

Tatty but sound French runners, MoTd at top end; sound non-MoTd Slough cars needing revival.

£3000-£4000

Shabby-to-respectable French cars; British cars needing limited attention to put back on road.

£4000-£5000

Very decent French-sourced cars.

£4250-£5000

Slightly shabby but MoTd British cars, probably 'big-boot'.

£5000-£6000

Irreproachable French-sourced cars.

£5000-£7000

Good British-sourced cars, Slough-built or Parisian.

£5500-£8500

Respectable British-sourced 15-Sixes; restoration-project coupés.

£7000-£10,000

Respectable French-sourced 15-Sixes, with 15-Hs at upper end of bracket.

£10,000-£12,000

French-sourced 15-Hs in top order; derelict cabriolets.

£15,000-£18,000

Coupés in top condition.

£24,000-£28,000

Cabriolets in top order.

Conclusion

Be prepared to go hunting in France where prices for Parisian cars can be lower; be aware of the Traction Avant's mechanical frailties, and join the Traction Owners' Club; be patient, too, if you want a small-boot Légère, as these are scarcer than big-boot Normales, and you'll have to be extra-patient if your heart is set on a Familiale or a 15-H. But hang on in there and you will be rewarded with possession of one of the most important vehicles in the history of the motor car, and of a family saloon that is as beautiful to behold as it is seductive to drive. With parts readily available and generally modest in price, you need not feel guilty, either, and can enjoy your Citroën Traction Avant to the very full.

JOYOUS IN JULY:
TVR M SERIES

