

The following Q&A questions are from readers of Jaguar World and may be relevant to club members cars.

Mk II Overdrive Fault

The overdrive in my 3.4-litre Mk 2 (1962) has begun to misbehave. At first it just seemed sluggish to engage, but now it will not engage at all. I have checked the electrics and the solenoid is shunting back and forth without hesitation, so what else could be the problem? Is there anything I should try before removing the unit for overhaul?

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Start by checking the oil level and the solenoid adjustment, which is done by removing the cover plate just forward of the solenoid, energising it and seeing whether a 1/8 inch drill bit can be inserted through the hole in the actuating lever and into the corresponding hole in the aluminium casing. If not, then slacken the locknut and adjust the operating rod until the two holes do line up.

If that fails to improve things, drain the oil. If it has brass filings in it, the problem will be serious, if not unscrew the plug at the bottom of the piston assembly and clean out the gauze filter before refilling with good quality oil of the correct grade.

Smoky S-Type

I have a late 2002 S-TYPE R which has 60,000 miles on the clock. It was laid up for a while, and over recent months I have noticed that often there is a significant amount of blue smoke produced from both exhausts when the engine is started from cold after several days without use. The oil consumption has not increased and amounts to 1-2 litres between oil changes. Engine performance and behaviour is otherwise satisfactory. The dealer from whom the car was purchased cleaned the engine breathers and reprogrammed the ECU, but this has not improved matters. I wonder if this problem has been encountered before, and what the actual cause is likely to be?

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One possible cause of your problem is over-enrichment once the engine has cooled after a couple of days. A diagnostic unit or the dealer's own computer would be needed to confirm this. While have not heard of valve stem seal wear being a significant problem, it also could be a possibility from your description. One way to confirm the valve stem seals as the problem would be to accelerate hard, then back off sharply and look in the mirror for signs of blue smoke.

Blue smoke on acceleration on the other hand would indicate worn rings, unlikely as your car will have the later steel lined block. Theoretically, it should be possible to replace the seals without removing the cylinder heads.

XJ6 S2 - Air Cleaners

I have bought a 1974 XJ-C 4.2. The previous owner fitted pancake air cleaners, which make too much noise for my liking. There is a blanked off vacuum line which I understand operated some sort of flap arrangement; what do I need to buy to get it back to standard?

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The standard air cleaner is of the flat paper element type. The outer part of the air cleaner housing incorporates a vacuum operated flap normally biased to feed cold air from a trumpet above the radiator, but when the intake air is excessively cold can be engaged to direct warm air from around the exhaust. The purpose of this is to keep the incoming air warm so that the fuel vaporises more effectively, reducing hydrocarbon emissions.

You will need the main air cleaner assembly, a steel duct to feed warm air over the top of the head, two flexible ducts (one rubber the other convoluted aluminium), spacers to go between the air cleaner and carburettor, and two pieces of vacuum hose — one to go from the inlet manifold to the temperature switch in the air cleaner rear housing, the other to go from the switch to the vacuum servo. Second-hand parts are usually available.



XJ-S Headlining

I have an XJ-S with a sagged headlining that has become a nuisance. Is there anything I can do to improve the situation without having to resort to a coach trimmer?

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This type of headlining drops when time and continual exposure to heat breaks down the foam backing leaving nothing to support the cloth. As long as the glass-fibre backing is undamaged, re-covering is not that difficult on an XJ-S as unlike the saloons, there is even room to remove the backing board through the door aperture without resorting to working upside down or removing a screen. You can purchase an appropriate glue, but for a perfect job, or where the backing is damaged, we would recommend leaving it to a professional.

Where to Jack an E-Type?

I have an E-type Series 2. My query is as to the best way to jack the car up. Can you advise?

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At the front all E-types should be jacked at the 'picture frame,' just in front of the engine where all the main chassis tubes converge, not the support panel under the radiator. The picture frame has flanges fore and aft, and so to avoid damaging these it is recommended that a piece of wood be cut to fit into the recess and spread the load.

At the back, a block of wood should be cut to fit snugly between the exhaust pipes so you can lift underneath the suspension 'cage' lower tie plate.

To support the car while working underneath at the front, axle stands can either be placed under the lower wishbone inner mount or, as we prefer and with the wheels removed, under the splined hubs. When opting for the latter position, however, it is vital that the hubs themselves be protected with thick rubber or similar padding.

At the rear position axle stands under the jacking points adjacent to the radius arm forward bushes.



Nikasil X308?

I am considering buying a 30 June 2000 XJ8 with the VIN SAJAC13D6YKF17159. I was hoping you could tell me whether it had Nikasil lined bores or not, as I cannot seem to get a definitive answer from the web.

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A Nikasil car cannot be identified by the VIN alone — the engine number, located behind the water pump on early cars and adjacent to the left-hand engine mount on later cars, is the only way to prove conclusively one way or the other.

On V8 engines the engine number represents the time and date of manufacture, the first steel-lined engine being number 0008181043; that is, it was built at 10:43 am on 18 August 2000. Do bear in mind that Nikasil engines only fail when exposed to high sulphur petrol (eliminated from the UK at the beginning of 2000).

Cars in Australia, for example, have suffered very few Nikasil related problems.

X300 Valve Clearance?

I have a 1997 XJR. I am rebuilding the and have been meticulous in setting the valve clearance with the cams in situ and the head on the bench before installation and had set them all to 13 thou. However, what I have found since checking the clearances whilst fitted to the engine is that some have closed to 10-11 thou.

The reason being that the camshaft bearing caps are set at about 28Nm and as soon as you put the head bolts through and tighten to 60Nm and then a further 90 degrees because of the SPS system for the bolt, this appears to then tighten everything down further and alter the valve clearances. Can you tell me the correct procedure?

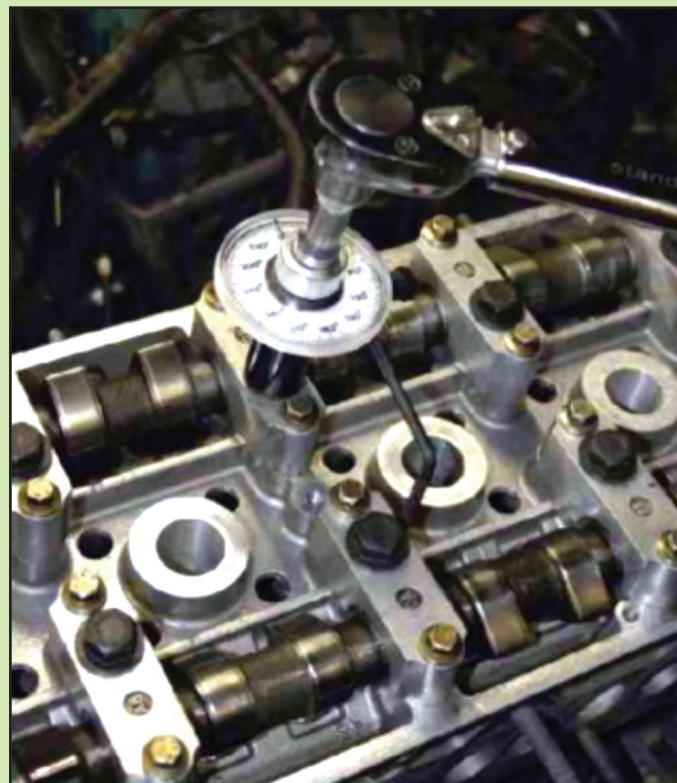
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The X300 workshop manual makes no mention of allowances for cylinder head tensioning, but rather confusingly states that when overhauling a head, the valve clearances should be set on the bench without the head bolts, but then rechecked with the head tensioned.

As long as there is sufficient clearance to prevent burned valves, the actual clearance is less critical than the fact that they should all be the same, as it is the odd clearance that make the engine sound noisy. AJ6 and AJ16 clearances seem to change more than on earlier Jaguar engines as everything beds in, yet few seem to be noticeably noisy.

My experience is that once reassembled, with all the shims in their original positions, I have consistent readings around 14 and 15 thou, so I am quite content to reassemble everything unaltered.

Ten thousand is a bit on the low side, but my recommendation is to let everything bed down for a couple of thousand miles then recheck if you're still concerned.



XJ6 S3 - Fuel Overflowing

I have a problem with my Series 3 Daimler VDP, in that it leaks petrol from the left-hand overflow when running on the right-hand tank; this has only happened since the tank was removed for repairs.

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To ensure adequate supply and keep fuel temperature in the fuel rails as low as possible, the pump flows at a higher volume than necessary with the excess returned to the appropriate tank via a separate pipe and solenoid valves mounted in each rear wheel-arch.

To keep the wiring as simple as possible, these valves are biased differently side to side, one open, the other closed with no current flow, and the other way round when energised. If the 'open' valve was not reconnected, or in some way disabled during the repair then it would not shut when running on the right tank and so allow a portion of the right tank fuel to enter the left tank, eventually causing it to overflow.

To check the system is working correctly, open the appropriate fuel filler cop while the car is running and depress the anti-surge plate with a screwdriver; the fuel return pipe should be visible and flowing fuel. Then switch to the other tank and check that the original shuts off and vice versa.

These valves are in a vulnerable position adjacent to the road wheel, and consequently spend much of their lives coated in mud, leading to eventual failure.

Recommissioning an E-Type

I have recently bought a 1969 E-type Series 2 FHC. It has been in dry storage for the last 12 years, but it was started and driven occasionally in this time.

It seems to be running too rich. Can you make any suggestions why the carbs should have gone out of tune and also recommend a list of general recommissioning work that should be completed before using the car regularly?

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After 12 years storage would recommend replacing the jets/diaphragms in the carburettors as they will have undoubtedly hardened and are likely to crack as soon as the carbs are adjusted. In fact, it would be worth replacing all of the fuel related gaskets/seals including those in the pump plus the pump diaphragm and points.

Even though the tyres may look fine they will be covered in cracks by now and be far too hard to grip safely, so replacement is a number one priority safety-wise.

Other than that, go for the basics; replace all the oils and fluids, which will have broken down over time, and check carefully all of the rubber bushings, especially the bonded ones, which often separate as the metal backing corrodes. As for the exhaust, as soon as it starts to make noises fit a decent stainless system.

S-Type Stuck In P

I have a 1999 S-TYPE 3.0-litre automatic which has done 71,000 miles. About three days ago I parked the car outside the house, engaged the 'P' position (Park) and locked it. About four hours later I returned to the car, switched on the ignition and started the engine. When I attempted to take the gear lever from 'P' position and engage 'D' (Drive), the gear lever refused to move.

After several attempts to disengage it, I then placed both hands on the gear lever and eventually forced it into Drive. The gear selector functions perfectly well in all other positions, and also engages Park normally, but when I try to remove it from 'P' there is still considerable resistance.

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The J-gate assembly incorporates a safety lock to prevent release from Park until the driver has applied the foot brake. It is this interlock that is almost certainly giving trouble. The entire J-gate assembly comes in one piece.

A less likely cause on an S-TYPE, but one worth checking first, is whether the brake pedal switch is working correctly.



XJ-S Immobiliser

Ever since suffering heavy water ingress, my XJ-S's immobiliser sometimes doesn't cut off, and the car just turns over with no spark. I have been disconnecting the battery then reconnecting it, which sometimes works. This may sound silly but it seems to happen when I am parked on an incline, facing downhill!

Could the problem have something to do with going through the water? Any idea what I can do?

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As far as XJ-S factory alarms are concerned the only realistic option is to lob the whole lot over your left shoulder and fit an aftermarket system if desired (or required by your insurance company) as most of the main components are no longer available from Jaguar. Fortunately, the XJ-S has now aged to the point where theft is much less likely if common sense is used when parking.

Rattling X308

My 1998 X300 has travelled 159,000km and has a chain rattle at start up.

I have replaced upper and lower tensioners, all the chains, and both the VVT units but the rattle is still there, coming and going until the engine warms up.

I have run out of things to change, and wonder if you can give me any ideas; I should mention it does not burn oil, and fuel economy and performance are both good.

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If the tensioners were replaced with the latest metal cased type (the first types had plastic casings), these have a different internal mechanism and it is highly unlikely that they are the cause of the rattle.

Too other possible causes for a rattle, though not necessary temperature dependent, are the drive belt tensioner and pulleys, (particularly if coolant has leaked onto the tensioner, or debris from the old belt is still stuck between the pulley grooves), and the down pipe catalyts

Unfortunately, without actually listening to the engine we cannot offer any further suggestions

X300 Steering Wheel

I have just purchased an X300 which has a full leather steering wheel but I have seen a picture of an interior which features a part wood/part leather steering wheel. I am trying to source one without success but no one has been able to help so far. Can you cast some light on this and if possible, let me know how I could get hold of one?

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According to the brochures, the part wood/part leather wheel was available as an option on all models, and was standard fitment on others, so there must be some out there! We'd suggest trying one of the many Jaguar wreckers out there, or contact Myrtle Productions (www.myrtleprod.com) as it can supply any design of Jaguar steering wheel.



Daimler V8 Steering

I have a Daimler V8 21/2 and whilst the steering is OK, though a little vague, over 20mph it does require some excessive arm twirling. I am considering fitting power steering. If so, can you answer these questions?

- 1. Would a later Daimler 'box or a 420 'box be a straight fit? These seem hard to find.*
- 2. How about a rack conversion? I prefer to keep the dynamo and use an all-hydraulic set-up or is the hybrid, hydraulic/electric option worth the extra aggravation? Some comments seem to disparage racks but is this just a purist's view?*
- 3. I assume that I could fit a power steering pump in the same position as the factory.*

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Firstly, under no circumstances should an XJ steering rock be fitted; the pivot angles are completely wrong, and will cause massive bump steer, sometimes wearing one edge of the tyre through to the steel reinforcement within 1,500 miles.

A Daimler V8 has a good deal less weight over the front wheels than a 3.4/3.8 car, and so should require less effort to steer at low speeds. Your comment about vague steering indicates that there may be a problem with the bushes/ball joints alignment or tyre sizes/pressures.

If the existing front suspension is properly sorted, with particular emphasis on the correct caster angle, the car should be relatively easy to steer. If desired, a Mk 1 steering box, idler and drop arms can be fitted to reduce the number of turns lock-to-lock (at the expense of slightly more weight, of course).

There were two hydraulic power steering options, the earlier type is less reliable but will bolt directly to your existing suspension cross-member, while the later Variomatic system will require a recessed cross-member from a 420, Daimler Sovereign or late Mk 2/S-type.

X-Type Drowning Noise

I have an X-Type AWD with 22,000 miles on the clock. I have replaced all the tyres with new Pirelli as Jaguar recommended, but from 55mph up until 75mph I still get a droning noise. It is not that loud, but it is annoying, and does not seem to be affected by different road surfaces. Any ideas?

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There is still a possibility the noise is tyre related, or it might be a wheel bearing, but unfortunately the AWD X-TYPE's have a reputation for eating transfer cases.

The only way to confirm one way or the other is to run the car up on a wheels-free ramp and listen to the various components while rotating at road speed with an automotive stethoscope.

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X300 XJR - Box of Tricks

Problem: As the GM automatic transmission warms up, the gear changes start to become violent. This isn't so obvious when under power and it doesn't happen at every change. Also, when braking (mainly on motorways) the 'box will change down from fourth to third, even if you just tap the pedal, but as soon as you accelerate again there is a pause and the 'box changes back up to fourth.

I've had the 'box inspected by a specialist who performed a diagnostic check and service. They found no faults and no debris in the pan, the only issue being a low oil level (but no signs of a leak). What can I do next, as the issue really spoils the driving pleasure?

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Oil level can have a significant effect on the operation of this gearbox which also requires regular servicing — that is an oil and filter change every 30,000 miles.

The low level you mention may be due to minor seepage over a long period or incorrect filling the last time it was serviced.

If the problem persists try a service before delving any deeper, and remember, changes will be a lot sharper in Sport mode.

X-Type Wiper Worry

Unfortunately, one of the nuts securing the wiper arm on my X-TYPE seems to have been over-tightened and the arm seems to be stuck solid with rust and is not about to move which means I can't gain access to change the pollen filter. I've been told that the spindle is all part of the wiper motor/linkage and not available separately.

Do you know whether it might be possible, after undoing the trim retaining clips under the arms, to create enough space to reach underneath to get to the filter.

Alternatively, if I was able to obtain a used motor/linkage from a wrecker (even if the motor itself didn't work), is it possible to remove the linkage from the motor?

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Unfortunately, the wiper motor and spindles are only available as a complete unit, and like most modern components, it's not designed to be easily dismantled.

Fortunately, they seem to be quite robust and so sourcing a second-hand one from a wrecker shouldn't be too difficult.

By the way, several tool companies actually make a small puller specifically designed for removing wiper arms without damaging the spindle.

Key Problem with X300

I recently parked my 3.2 litre X300 in the drive and left it for a week as I have done many times before. When I returned, I pressed the key fob to find nothing happened other than the headlights coming on for about 20 seconds.

The same thing happened with both spare fobs, all of which have good batteries. Using the key the central locking works as it should, but when a door is opened the interior lights do not come on. Then, with the key turned in the ignition, the warning lights all come on but the engine will not crank. All of the fuses have been checked, the inertia switch has not tripped and a new battery has been fitted. Can you suggest anything further to try?



The fact that both the alarm fob and key are causing trouble precludes a specific fault with either. We would then suspect the alarm module itself as that is where both eventually cross paths. On an X300 the module can be either in the fuse/relay box adjacent to the battery in the boot, or in the boot itself, behind one of the side trims.

As most alarm related work on an X300 requires a degree of reprogramming with the right equipment, we would have to suggest turning to a local specialist for help.

S-Type Handbrake Cover

My 2001 S-Type (4.0 Litre) has a worn hand-brake cover (gaiter). I have purchased a new one from Jaguar but would appreciate some assistance with the correct procedure regarding its fitting.

Is it quite straightforward or is it a case of the car being built around the gaiter!

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You have to be quite forceful, but the basic procedure is to put the car in neutral, apply the hand-brake, and then just pull the whole assembly straight up until the clips release.

The gaiter can then be replaced before pushing the console back down into place.

XK8 Whirring Noise?

I purchased a 2000 XK8 Coupe (8,000 miles). I am concerned about a droning/whining noise that sets in at about 30mph and seems more pronounced on certain road surfaces. The car is fitted with Detroit wheels (pictured) and Pirelli tyres. The wheel bearings have been checked by a specialist who also checked the differential; all components being pronounced serviceable. Tyre noise was put forward as a possible explanation. Yet I still can't help thinking that the noise is bearing related in some way as the frequency seems to be in sync with something rotating



We still wouldn't rule out a wheel bearing problem as they are a notorious weak point on all V8 XJ and XK cars. The problem is that they can feel reasonably tight until the moment when they let go completely. Part of the problem might be improperly fitted bearing retaining clips, which should be aligned with the slot to the bottom, otherwise any moisture will not drain away and corrosion can result.

That said, there is also a strong case to be made for tyre noise, especially with the combination of big wheels and Pirelli tyres. Would it be possible for your specialist to try the car on standard 17 or 18 inch wheels in order to prove the case one way or the other?

X308 Spark Plug Torque

Regarding my 2000 model Vanden Plas (XJ8), when replacing spark plugs, is there a torque value that should be followed when tightening the plugs?

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The V8 engine uses conventional spark plugs incorporating a sealing washer, and the specified torque is 28Nm, but it is quite acceptable to simply tighten by hand until snug, then tension a further 1/4-5/8 of a turn.

For taper seat plugs, such as fitted to the HE V12, only tension a further 1/16 of a turn. Remember, new plugs will always tighten further from initial contact of the washer than used ones as the washer itself is designed to compress slightly.

XJ-S V12 Coolant

I am the owner of a 1992 XJS V12. The car has done 34,000km. According to your magazine, my radiator coolant should have been changed by now, but the coolant looks new, if that is any indicator. The problem is that Jaguar seems to have dispensed with the drain tap, so was it their intention not to have the coolant changed?

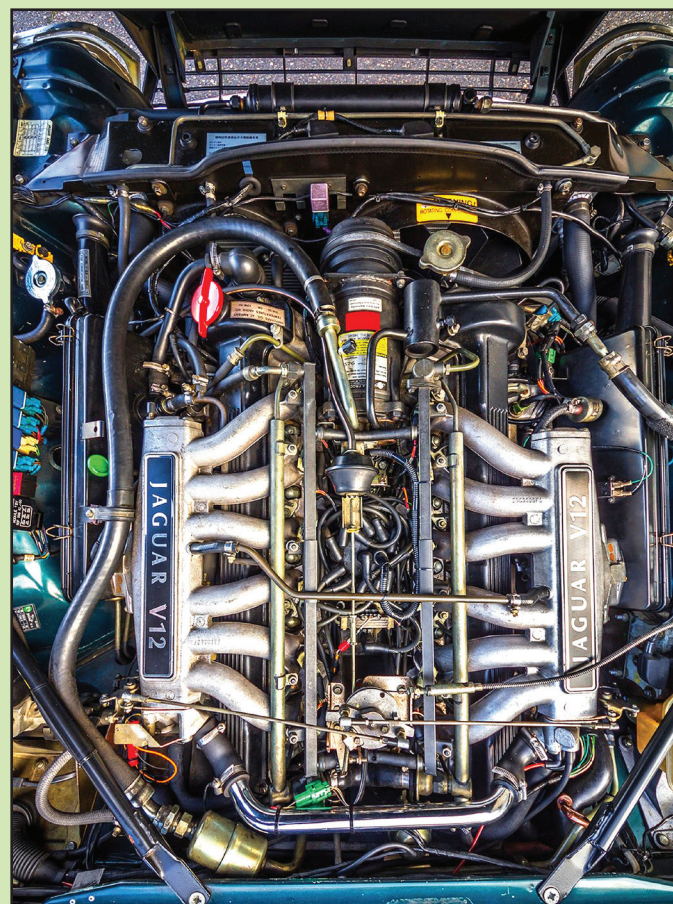
The bottom hose could be removed, but was this what was intended? Its removal and replacement will not be easy and it will be difficult to avoid a "shower".

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Coolants effectiveness in the areas of corrosion and frost protection degrade with time. You are indeed correct; Jaguar discontinued the drain tap in the late 1970s. The replacement plug itself was short lived, to be superseded by the 'bottom hose' method.

With care, it is possible to remove the hose in a controlled fashion and avoid the moist shoe syndrome. Remember to ensure the heater valve is open and maybe jack up the rear of the car to achieve full draining. Flushing by inserting a garden hose in the filler cross rail is also desirable.

Alternatively, if you intend to replace the bottom hose, you can cut an old piece of brake pipe at an oblique angle to form a sharp point like a syringe needle and stab the bottom hose and direct the coolant flow into a receptacle — allow a little time by this method!



X-Type Door Mirror

A few weeks ago, a local delivery driver accidentally knocked the door mirror off from the passenger side of my X-TYPE. I managed to reinsert the mirror glass (which fortunately hadn't broken) and clipped the plastic cover back into place on the back of the unit. Unfortunately, I haven't got the mirror glass into the housing properly, but find that I can't get the back of the mirror housing off to allow me to refix the glass.

It shouldn't be too hard for me to fix myself, but I can't figure out how to get the back cover off the mirror unit. Can you help?

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In fact, it is not necessary to detach the plastic cover to remove/replace the mirror glass. This is one of those jobs that is easy to do when you've done it before! However, it is deceptively easy to break the glass, so it may be wise to get a specialist to do it for you. It is very quick, so the charge should be minimal.

Should you wish to attempt it, remove the glass by motoring the mirror inwards so the outer edge is exposed — grip this edge and pull firmly outwards, then pull towards the rear of the car. The glass should then be in your hand, and still in one piece. To replace, hook the mirror inner fixing to the motor carrier flange, pull firmly outwards against the spring pressure whilst pushing the mirror towards the front of the car. It should then clip into the correct position.

S-Type Parking Sensor

I own a 2005 S-Type 2.7D sport. Can you tell me why my parking sensors only seem to work when the sun is out? When it is cloudy they do not work, so it appears the sun seems to have an effect on them. They don't work at night either!

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It is possible that the apparent 'heat affected' nature of the problem points to failing sensors — the warmth may improve their performance to a level acceptable to the control module. It is worth having the fault codes analysed to indicate which sensor(s) is/are faulty.



XKR (X100) Cooling Fan

I have an annoying problem with the radiator cooling fans on my 1999 XKR convertible. It has 103,000 miles on the clock and runs very well, but the driver's side cooling fan keeps cutting in at high speed and is noisy. The engine temperature indicator on the dash always shows mid-scale normal.

I have had the cylinder cooling water radiator flushed on the water side and air blasted on the air side to clean it. I have replaced the thermostat and the water temperature sensor. A quick check of the water pump by observing the flow in the header tank reveals that it appears to be OK.

I know that the fan is initiated by high water temperature, and high pressure in the air conditioning condenser. The air conditioning appears to work perfectly well.

Before replacing the condenser pressure sensor, or replacing the water pump, is there any record of this problem with other XKRs of 1999 vintage?

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Various thoughts occur. Firstly, by design, the water temperature gauge indicates mid-scale until the engine reaches a potentially damaging temperature, at which point the needle will move to full scale and the overheat warning light illuminates. Therefore, to establish the actual running figure, something like an infrared handheld thermometer must be employed. These are relatively cheap to buy.

The fan control module should connect both fans in series for low-speed operation (quiet) switching to parallel as temperature rises, giving full speed operation (relatively noisy), again on both fans. This usually only occurs in hot weather.

As you appear to have only one fan working at high speed the control module is the likely suspect, but before changing it first check the two individual high- and low-speed fuses. A faulty motor can be eliminated by disconnecting and powering straight from a battery. Finally, a continuity check should be carried out on the wiring to look for hidden faults.

X308 Airbag Issue

On a 1997 XJ 3.2 Sport, what would cause the airbag light to stay illuminated once the engine has started, and sometimes bring up the word AIRBAG in place of the odometer? The car has sat unused for about six months, and the local Jaguar garage can't seem to find the problem.

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The only way to diagnose ABS faults on these cars is with the correct software, either Jaguar's own, or an aftermarket system. Two possible faults are a damaged cassette within the steering wheel, or possibly a blown in line fuse if the car was jump-started.

XJ-S ABS?

I have a 1989 3.6 XJ-S which has been off the road for the last 10 years. Can you tell me if this vehicle has ABS as standard, or was it an optional extra? My vehicle's wiring harness ends at the connection for ABS, and it has no ABS sensors. However, I have been told that it has an ABS ECU in the boot (it is silver and sits on the passenger side). I am concerned because the car came to me after the previous owner had tried to repair it and I am not entirely sure what he has been messed with.

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The ECU that is in the boot should have the letters ATE cast into the housing. This is for the ABS. The engine ECU is mounted within the cabin below the front passenger toe-board. It would appear, then, that your car has been converted back to standard brakes, probably as a result of either accident damage or a fault that proved too expensive or complex to repair economically.

As long as the correct pre-ABS master cylinder and vacuum booster (ABS cars pressurise the fluid itself, the pedal acting more like a valve) have been fitted, and the pipe work connected up correctly, then all should work OK as the calipers and discs fitted to ABS cars are the same as for non-ABS.

As long as none of the looms have been cut or damaged, it should theoretically be possible to reinstall the missing components, sourcing replacements from a wrecked car, though this may even include the front and rear hub assemblies if they have been swapped for ones without trigger wheels and mounting brackets for the sensors.

Feeling XKR tension

I am looking at buying a 4.2 XKR, one of the first to use the 4.2 400bhp engine. A fellow Jaguar enthusiast mentioned that there has been an historic problem with timing chain tensioners that I should be aware of. He had to get them replaced on his 3.2 V8 XJ, but thinks the problem was rectified on newer cars. The car I am buying has 85,000 miles and a full Jaguar service history. Is this likely to be a problem?



All 4.2 Litre cars have the later aluminium cased tensioners that (so far) have proved reliable, unlike the two earlier plastic versions that had a nasty habit of falling apart. Your engine will also have the much stronger Morse chain with revised cam and crankshaft sprockets to suit.

S-Type Seat Rake Adjust

I own a 2005 4.2 V8 S-Type, which I bought new. My only gripe with the car is that I wish I had specified the front passenger seat to have the full electric adjustment that the driver's seat has. Although the passenger seat adjustment is electric, it doesn't have the seat squab tilt. This means that the squab is very flat and gives no support to the legs.

I wondered if someone sells a bracket which could be fitted to tilt the front of the squab up slightly as a permanent adjustment. Have you heard of such a modification please?

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We are unaware of any supplier of brackets to achieve your desired effect — however, such a product is hardly necessary as the additional tilt adjustment can be simply affected by interposing spacer washers between the floor pan and the front end of the seat runners.

Remove the E Torx 12 'star drive' fastenings from the front positions and loosen the rears. Up to 15mm of additional spacing is then possible with the original bolts — any more will require longer replacements (the thread is M10 x 1.5mm pitch) — remember to retighten the rear bolts when the ideal angle has been obtained.



X308 Bumper Woes

What steps are required to remove the rear bumper moulding on an X308?

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The back bumper is easy to remove, just undo the two 19mm bolts accessed from underneath, then slide the assembly back, disengaging the forward ends from the wheel arch liners as it goes.

If the car is fitted with reverse park sensors these will also have to be unplugged.

When refitting, the bumper height can be adjusted by screwing the sleeve within the mounting bracket up or down. In damp climates the aluminium mounting brackets corrode quite badly and often need replacing.

XJ40 Body

The XJ40 body shell was a major step forward in terms of rust proofing and production simplicity. Gone were the days of lead loading and moisture trapping double skins, replaced instead with fewer and simpler panels together with the odd cover trim (notably the rear pillar) where a join could not be hidden.

Despite all this, these cars can still rust if not kept scrupulously clean underneath. Common problem areas being the rear wheel arches, front inner valance, screen surrounds, the boot lid lip and the front corners of the bonnet.

Perhaps the area that's potentially the most significant risk for corrosion, though, is the forward bulkhead (firewall) which can rust right through should the plenum drain become blocked, and require a full strip out of the dashboard to repair effectively.

The most notoriously unreliable aspect of the body is the door handle design on pre-1989 cars which used a sliding lever mechanism. These soon ran out of lubrication, placing excessive load on the (weak) pivot bracket and invariably snapping it off. The later 4.0-litre type handle is much better but cannot be retro-fitted, so on early cars the only option is to first pay for a new assembly, and then remember to keep it well lubricated.

Water leaks into the boot are quite common, and in most cases can be fixed by sealing the ledge (black plastic covering) with windscreen sealant below where the trunk lid meets the car when the lid is closed. Also check the radio antenna grommet and fuel filler liner.

XJ40 - Transmission

The fully mechanical 4HP 22 transmission fitted to 2.9, 3.2 and 3.6-litre cars is just about bullet proof, and with regular servicing should last the life of the car.

The 4HP 24 E9 dual mode gearbox fitted to 4-litre cars is still very good, but can suffer from the odd electrical glitch and these are best left to a specialist to sort out.

The GM 4L 80E gearbox fitted to the VI 2s is basically an updated Turbo 400 with an overdrive fourth gear. They are generally reliable but can develop a whine in first and reverse gears, which although slightly annoying is not generally a warning of imminent failure.

Manual cars were fitted with, in turn, GETRAG 265 (separate bellhousing) and 290 (integral bell-housing) type five-speed transmissions, which, although very long lasting, have virtually no parts backup so it is a good idea to note which is fitted and keep a spare 'box' handy.

The hydraulic clutch should ideally be flushed with fresh fluid every two years and rebuilt every six.

XJ40 - Brakes

Early cars (pre-89) used a hydraulically boosted Girling system, incorporating a ram behind the conventional master cylinder sharing its fluid supply with the self-levelling rear suspension (when fitted). The accumulator sphere will eventually leak away its nitrogen leading to a low-pressure warning after one or two pumps of the pedal, while the two pressure switches — one to regulate pressure, the other to operate the warning light, will almost certainly start to leak long before they fail electrically.

Replacement of all three is straightforward once the pedal has been pumped at least twenty times to depressurise the system fully.

The early system is also prone to seized caliper sliding pins and so at every pad change the rubber boots should be pulled back and new copper grease applied as required.

The pad wear indicator system operates by sensing an open circuit or short to earth so, when tracing a false warning, bridge out at the main loom connection to systematically eliminate each wheel as there can be damage to the link lead.

Later cars are fitted with an ATE braking system which pressurises the fluid itself, the pedal then acting in a similar way to a valve controlling the level of force. The system is extremely reliable, though as with the Girling arrangement, the accumulator sphere will require periodic replacement.

With the exception of a few 2.9-litre cars, ABS is pretty well standard and as with the rest of the system, it is on the early cars that most problems occur. Corrosion of the rear hub carriers can crush and short out the rear sensors (coat replacements with copper grease), while dry joint failure in the circuit board of the over-voltage relay can cut power to the system completely — the white relay (with integral fuse) is located in the boot adjacent to the fuel filler recess and, with care, can be taken apart and then re-soldered.

XJ40 Differential & Driveline

The XJ40 is weak in the differential which will wear and become noisy, often within 100,000 miles. A new set of bearings is usually all that is needed, but if a leaking pinion seal is ignored for too long or the bearing is incorrectly tightened during seal replacement, the entire assembly can be severely damaged.

Also check the rear prop-shaft coupling regularly as they are made from rubber and will crack eventually.

The universal joints forward of the coupling are more likely to become notchy, while a missing balance weight can produce a vibration similar to an out of balance wheel.

XJ - Front Suspension

Pre-1989 cars used Series-3/XJ-S type upper wishbone bushes, which can wear significantly over time and alter the suspension alignment. Later cars are fitted with a much more durable bonded rubber type.

Lower bushes will move off-centre in relation to the shaft as they age. The shafts also commonly seize in the subframe and require heat to loosen.

Often ignored, but crucial to handling precision on all cars, are the subframe mounts, particularly the forward V mount which can separate completely and let go unnoticed when the car is raised for servicing as spring tension clamps the two halves together. Look for swollen rubber or the tell-tale shiny patch where they rub.

Wheel bearings seem to fail quite regularly, so to prevent expensive hub and stub axle damage it is worth checking them every time the car is serviced, and we'd advise replacing them every 30,000 miles to avoid any unnecessary dramas.

Dampers usually last around 80-100,000 miles, but in that period will consume at least two sets of upper mounting bushes made from a dense foam that hardens and crumbles over time.

Never loosen the damper mounts without the full weight of the car supported on the spring as the damper is the lower bump stop and remains under tension when the wheels hang free.

XJ40 - Exhaust

The (semi) stainless steel exhaust system fitted as standard does last well, but will eventually corrode through at the rear silencers and bends.

Mild steel replacements are available but offer false economy as they will usually rust through. Whereas a good stainless system and it will be there for life.

Most audible leaks, however, will usually be due to failed manifold-to-head gaskets, as there are insufficient studs to clamp adequately. There is no real fix, other than to replace the gaskets as soon as a leak is detected to prevent erosion of the head face.

Catalysts, where fitted, can often last the life of the car, but the lambda sensors will degrade after about five years, increasing emissions and reducing fuel economy — treat them as a consumable item.

Last but not least, at every service check the exhaust clamps carefully as they are prone to both corrosion of the bolt and splitting off the stainless steel band.

XJ40 - Electrical System

Virtually all XJ40 electrical failures are caused by dry joint failure, that is a poorly soldered joint on a printed circuit which, with continual heating/expansion and cooling/contraction eventually separates — intermittently at first, but leading to permanent failure.

Once located, bad connections can often be re-soldered. The tricky part is finding them in the first place. From 1989, improved quality control, together with a change to analogue instruments improved things in this area considerably.

The most common problem areas seem to be: -

- ◇ The lighting relay units, misleadingly known as bulb fail modules,
- ◇ The circuit boards behind the instrument cluster and,
- ◇ The over-voltage relay for the ABS, previously mentioned.

Should the wipers fail without reason, look for a blown inline fuse behind the glovebox. It was put there at the last minute to protect the motor should the wiper arm freeze to the screen.

When fitting a tow bar, the correct interface unit must be used for the trailer/caravan plug, otherwise permanent and expensive damage may occur.

The square headlamps found on Sovereign and Daimler cars are both expensive to replace and can be limited in output, but it is possible to fit the quad round headlight arrangement (utilising standard five-inch lamps) from a standard XJ6, as long as the twin output control units are also fitted. Being body colour the surrounding trim may have to be painted to match the car.

XJ40 - Steering

The ZF steering rack generally lasts well, but can become soggy in the mounting bushes with age.

Problems are more likely either with the pump, integral with the engine and prone to breaking its coupling, or the high-pressure pipe which has two flexible sections and can rub through one of them on the engine mount. If choosing to repair rather than replace this pipe, do not use steel braided hose as engine vibrations will then be fed through the car.

The wheel alignment on these cars can be knocked out of adjustment even with slight kerbing, often resulting in a tendency to tramline especially if the lower bushes are worn. For this reason, an alignment check once a year is a very good idea.

AJ6 Engine

3.6 litre engines can suffer from head gasket failure, either between the back two cylinders causing coolant loss and misfire on start-up, or at the oil return gallery resulting in a major oil leak.

In most cases a new head gasket is all that will be needed, but check the head for distortion and, if practical, de-coke the valves.

The original upper timing chain tensioners (with machined casing and removable plug) often suffer distortion and subsequent failure of the ratchet mechanism, causing chattering on start-up and in some cases allowing the chain to jump a tooth on the cam sprocket(s). The revised unit with a bare cast housing is much more reliable.

3.6, 3.2 and 4.0-litre cam cover seals will harden over time, normally leaking first into the plug recesses. Replacement is simple but be sure to replace the half-moon rubber plugs at the back of the head at the same time.

2.9-litre engines use a V12 head and have a mesh breather filter that must be cleaned regularly.

XJ40 Rear Suspension

Any cars still running self-levelling suspension should be converted back to standard springs and dampers at the first sign of trouble as repair of the original system is just not financially viable.

To disable the hydraulics when converting a car back to standard, first depressurise the system by pumping the brake pedal until it goes hard, then disconnect the hydraulic pipe at the valve block under the bonnet, plugging the opening one of the now redundant bleed nipples found near the top of each rear damper. The pipes can then be removed to tidy up if desired.

A squeaking noise from the rear of the car can usually be traced to the foam insulators above the springs. These should always be coated with copper based grease during damper replacement.

The round A-frame mounts which anchor the suspension assembly to the body just forward of each rear wheel take virtually all of the acceleration and braking force with natural wear compounded by the tendency of the cast alloy bush centre to corrode and separate from the rubber. A press and special dies are needed to replace the bushes.

The other bushes in the rear suspension will most likely last the lifetime of the car.

XJ40 - Interior Trim

The type of interior trim will depend largely on the spec level.

Base cars having cloth seats with moulded vinyl door trims and console, while the more expensive vehicles have leather and stitched vinyl (much easier to repair). Driver's seats in particular suffer from wear on the side bolster where the seat belt rubs. This is easily fixed by a skilled trimmer and overall the seating is much more comfortable and hard-wearing than on later cars.

The real secret to a lovely interior is to keep it away from heat and damp, that means shade in summer and keeping the air conditioning side of the system fully operational, as it will remove moisture even when heating the car in the depths of winter.

The dashboard and door trim veneer is bonded onto plywood and although it might fade, total failure is unlikely.

The console and ashtray veneer on the other hand is bonded directly to a steel support and will delaminate very quickly with exposure to heat.

Bonding methods have improved greatly since the mid-1980s and so a new re-veneered panel should be much more durable.

The headlining sandwiches a layer of foam between the glass-fibre shell and the actual material. Overtime, heat causes the foam to break down, allowing the material to drop. While technically possible to do at home, to ensure a good job, leave it to a professional trimmer.

6.0 Litre V12 Engine

In 6.0 litre form, the V12 engine is extremely reliable and, with reduced tolerances, even more refined, but it does depend on regular servicing and will almost certainly bite if neglected or overheated.

Allow plenty of time not just for engine repairs, but anything else in close proximity.

Replacing the lower wishbone bushes for example requires removal of the downpipe catalysts, which in turn often leads to snapped mounting studs and subsequent removal of the exhaust manifolds.

The biggest maintenance issue with V12 cars however is not the engine itself, but the additional stress it places on the chassis.

Everything from the suspension bushes to the dampers and brakes just seems to wear out a lot more quickly than on a six-cylinder car, resulting in much higher maintenance costs.

XJ40 - Wheels & Tyres

The 390mm TD metric wheels used in many markets incorporate an ingenious rim design to hold the tyre in place when deflated, unfortunately the concept never gained widespread support and was abandoned in 1992 when Jaguar switched back to a conventional 15 inch rim.

TD tyres are still available but remain relatively expensive. 15 inch tyres should never be forced on to a 390mm wheel and it is usually more cost effective to buy a set of imperial wheels and new tyres than replace the metric ones.

The XJ40 (and subsequent X300 and V8 models) adopted a different wheel offset compared with the previous XJ and XJ-S cars, with the rim positioned further in. This means that earlier Jaguar wheels cannot be fitted as the tyre will tend to rub on the wheel arch. Be careful when buying replacement wheels, as several designs were made in two different offsets depending on whether they were for an XJ40 or XJ-S.

The early 1990s also saw the company's first steps towards larger rim diameters after three decades at 15 inch with some later models such as the XJ 12 moving up to 16 inch, a size that was to become standard on the X300. Today there is a much wider range of tyres in 16 inch than 15 inch, so the fitting of later wheels would not just be of visual benefit.

XJ40 - Climate Control

The Delanair Mk 4 climate control system took a huge step forward in terms of electronic sophistication with a microprocessor and servo motors replacing the mass of valves and vacuum hoses used previously. Ironically the most common problem is failure of the 20-cent micro switch behind the fan control cutting power to the entire system, but replacement is not difficult.

Unlike earlier Jaguar systems most of the components are easily accessible. The ECU and flap motors (which can stick) are screwed to the outside of the casing and the heater matrix incorporate detachable pipes for the first time, cutting the replacement time from 16 hours to one.

The exception is the evaporator, replacement of which requires the whole casing to be removed from the car.

Most cars were originally charged with the now banned R12 refrigerant. The later gas can be retro-fitted, but this is best done with a new compressor and receiver drier. Do bear in mind that the new gas will not be as effective as R12 and a pinhole leak, commonly from either a corroded condenser or porous hoses, will quickly drop pressure sufficiently to stop the system working completely.

XJ40 - Cooling

These cars do not as a rule run hot, so any overheating should be investigated immediately.

Check regularly for blockages and corrosion in the lower third of the radiator but look also for corrosive build up around the alloy-rubber connections, particularly at the thermostat housing and the back of the water pump where an oft ignored hose feeds coolant back to a distribution rail on the side of the block.

Replacement water pumps are usually supplied just as a front housing, so check the back housing for corrosion in case a new one is needed as well.

The viscous fan coupling is temperature controlled, but should also load up for a few seconds when the car is started from cold as the fluid circulates. If it doesn't, fit a new one.

The vacuum operated heater valve is mounted at the left rear corner of the cylinder head via a short hose on pre- 1993 cars, but was screwed directly in from then on and is extremely difficult to remove without a cut down spanner. These valves rarely seize, but will leak eventually leaving a tell-tale stain on the chassis leg.

Fuel & Energy Management

A non-start will often be due to a failed crank angle sensor at the front of the engine or a faulty ignition amplifier, located under the coil. The distributor cap can also crack around the internal pins causing a misfire.

An early car that cranks for a long period before starting will usually require a new one-way valve at the fuel pump mounted on the rear suspension subframe.

On later cars, the pump is mounted in the tank, and can suffer overheating of the wiring at the flange connection, leading to fuel gauge and pump problems.

The hotwire type airflow meter is extremely reliable, but the throttle position switch mounted under the butterfly can be prone to oil ingress and wear in the lower range, often causing a flat spot.

Engine idle speed is electronically controlled and carbon buildup can cause the valve to stick. They can sometimes be cleaned out but this isn't a guaranteed fix.

If the car tends to stall at the same point during warm-up on a regular basis or floods the engine with fuel, fit a new coolant temperature transmitter.

The following Q&A questions are from readers of Jaguar World and may be relevant to club members cars.

X300 – Locked Boot

I have a 1995 XJR with a very flat battery. It also has a seized boot lock. The result is that I cannot open the boot because there is no power to the solenoid lock, and I cannot turn the key the 90 degrees necessary to open it manually, despite having liberally sprayed WD40 into the key aperture. Result, deadlock — literally!

I have tried to put some power into it via the cigar lighter socket (with the ignition key turned to 'on') but this has no effect. This model has the powered entry system for the seat and steering wheel that may be taking the power, although nothing actually moves. Also, the remote key fob does not work, so before this problem I was having to unlock the car with the key.

Can I get some power to the lock some other way, or do I have to cut the bootlid?

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There are at least two options before resorting to the hole-saw. Under the bonnet you can trace the cable from the starter motor back to the insulated pin on the bulkhead and apply 12-volts using jump-leads, but be sure to connect the earth cable at a safe distance, ideally somewhere on the engine. Make sure to leave the door open as the sudden application of power can cause it to lock unexpectedly and, in rare cases, be prepared for the odd blown fuse.

Alternately connect a trickle charger either via the connections described above or with a cigarette lighter attachment.

XJ-S Top Ball Joint Shims

I have a 1989 XJ-S 3.6 and, as I am sure you are aware, the top ball joint has shims either side of it. Can you advise whether there is a way to check the number of shims or the angle at home? Should the number of shims either side of the ball joint be the same on both sides?

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The shims either side of the ball-joint adjust castor angle, that is the angle at which the suspension vertical link leans forward or back from the upright position. Castor is used both to assist stability and help with self-centering.

There should be an aluminium spacer and four steel shims; the spacer always stays behind the ball-joint with the shims distributed fore and aft as appropriate. Accurate adjustment of castor requires special equipment to measure wheel inclination at various steering positions and it is not really feasible at home.

XJ40 Vibrations

My 1989 XJ40 Sovereign automatic has some vibrations from underneath. In addition, coarse surfaces are felt unusually well through the "seat of my pants", through the steering wheel and aurally as well. I have had the wheels rebalanced and checked. There is sometimes a distinct feeling of looseness/play when going over humps with the wheels dropping again.

The wheel bearings do not show any play with the car jacked up. Some bushings in the front suspension were replaced a couple of years ago; the rest were pronounced healthy. I am really wondering about where to look next.

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Vibrations at 55 to 65mph are most commonly wheel or tyre in origin, while those that rise constantly with speed are more likely to be prop-shaft related. Check for worn/partially seized universal joints or a split rubber coupling at the differential flange, and if all is good get a second opinion on the wheels.

Harshness on coarse surfaces is probably tyre related and has proven quite common with certain brands.

With regard to the looseness, check the front upper damper bushings as these are made from a dense foam and can compact then disintegrate over time.

XJR-S Software

I own a 1993 XJR-S. My car is equipped with the Zytec fuel injection and so I need to find the Zytec software discs, interface unit and cables so that I can tune the engine and fuel injection properly. Can you help me find these, or do you have any other suggestions to remedy this dilemma? I would also like to find a spare ECU. Apparently, there is an ECU programmed for performance.

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Zytec engine management has become a real pain in recent years, as it can only be tuned or have problems diagnosed using a laptop provided to dealers selling the XJR-S and XJ220, which also used the system. The problem now is that most of those computers and software have either ceased to work or have passed into private hands.

Jaguar has washed its hands of the issue and Zytec itself is unwilling to provide support.

You therefore have three options: find your local "XJ220 repairer, convert the car back to standard Lucas/Bosh injection together with a conventional electronic ignition system, or fit a modern aftermarket engine management system, which will undoubtedly be far superior to Zytec and infinitely tuneable.

XJ-S Bonnet Catch

My XJ-S bonnet will not fasten. The previous owner seems to have attempted some DIY on the mechanism and has replaced the catches inside the bonnet, then attached the two catches via one cable that runs directly to the nearside cabin lever. However, that merely half-closes the offside of the bonnet and despite pushing down the nearside of the bonnet the slightest bump or turn will pop it up again on that side.

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The left bonnet lock is operated directly from the cabin lever via one cable with a second cable operating the right (offside) lock from the left-hand lock. The procedure then seems to be that the left lock cable is adjusted first at the pinch bolt on the internal handle, with the right lock cable then adjusted at the pinch bolt on the left lock.

XJ-S Electric Windows

Slow windows. The offside electric window is painfully slow dropping and rising. Can you advise a home mechanic solution?

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Slow windows are often caused by the felt wearing away in the guide channels. A squirt of silicone lubricant can help, but if there is too much wear replacement of the felt is the only option. However, do check first that the grease in the lower guide channel hasn't set rock hard.

XJ-S Rear Radius Arms

The rear radius arms are showing signs of rust and the bushes are wearing. My mechanic is reluctant to start dismantling them as they are seized and he is concerned that the bolts will shear off and lead to ridiculous repair costs.

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The forward bolts normally rust above the thread inside the bush mounting boss and they will take a fair degree of force. If, though, nothing will move them, try first heating the bolt and then drilling a small hole in the boss above the bush to squirt WD40 or similar through to lubricate the end of the bolt. The most important thing is not to strip the thread in the boss itself.

The rear bolt can seize inside the bush and in extreme cases it may be necessary to heat the inner bush sleeve, or even cut the arm off and chisel the sleeve off of the bolt. New arms complete with bushes are, however, still available. A practical option, particularly if the original arm is starting to rust.

Winter Storage Issues

Every winter I park my 2000 S-Type 4.0 litre in the garage for six months. I disconnect the battery and pour some fuel stabiliser in the tank. Also, I have been inflating the tyres to 50psi. so that I don't get flat-spots, but I am thinking of putting the car up on jacks.

What are the pros and cons of such a move and if it's a good idea, what kind of stands should I buy, and where exactly do I position them?

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The problem with putting the car on stands is that no matter where they are positioned the suspension will drop to some degree, stressing the bushings and dampers and almost certainly negating any benefit to the tyres.

One measure we would recommend is the fitment of a battery conditioner, but be sure to use the 'intelligent' type, which systematically drains and recharges the battery as if it were still in normal use, but without ever overcharging. With the degree of electronic complexity on modern Jaguars this method is preferable to just unplugging everything for months at a time.

XJ40 – Variable Idling Speed

I have a 1995 XJ40 Daimler Double Six that is normally laid up for six months each year. When the car was taken out of storage this year it started no problem, but when ticking-over the revs constantly fall and rise between 1,000 - 2,500 rpm.

I suspected the choke, but don't know for certain as when driving the car, it drives perfectly with no variation in speed or revs, but when I stop and return to neutral the revs start to pulse again. Any ideas on this would be very much appreciated.

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It sounds as though something is causing the idle to rise well above even its normal cold setting; the high idle speed coupled with a closed throttle signal is then triggering the overrun cutout, bringing the revs down only to have them rise again straightaway. Look for a damaged, cracked or disconnected hose somewhere in the induction system.

The cold start idle speed valve is located at the left-hand rear corner of the engine and uses a wax bulb to expand and close off (substantially, not totally) the additional air intake. They do fail, but without an additional source of air would only raise the idle speed to the normal cold start setting of around 1,000 - 1,200 rpm.

XKR Brembo Brakes

Last year I bought a 2000 XKR with Brembo brakes. The discs and pads were worn all round so I had everything replaced, front and rear. I was advised to wear them in carefully so was very gentle for the first 2 to 300 miles. However, I obviously wasn't careful enough, because after about 2,000 miles the front brakes had developed a pronounced judder when braking from 70mph, which would then ease below about 55mph.

It was so bad that I went to the expense of replacing the front discs for a second time. This time I was even more careful for more like 500 miles; applying gentle braking as much as possible and even slipping the car into neutral when coming to a halt so I wouldn't be sitting stationary holding hot pads to hot discs. Despite this, I now have a judder from about 50mph down to 30mph. I have my car serviced by a very reputable Jaguar specialist and while the discs I bought were not Jaguar originals, I have been assured that they are of equal quality.

I'm reluctant to buy yet another set of discs and am considering having them refinished this time. I'm told that the problem is due to the static contact between two hot surfaces when the car comes to a halt and the transference of minute amounts of pad material to the disc, which then hardens unevenly, turns to cementite and causes the judder.

My questions are, firstly, have I understood that correctly? And, secondly, regardless of whether I have them reground or replaced, what advice can you give for running them in other than what I had done previously. Should it really be this difficult?

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The causes of the judder you mention all require high levels of heat build-up; cementite is formed from the iron in the disc contact area at extreme temperatures, and is unlikely to be the cause of your symptoms.

First, ensure that the disc and pad materials are compatible and preferably specified for use together by the manufacturer. Then check that the hub flange is perfectly clean before firing the machined discs.

Once fitted, disc run-out should be measured with a dial indicator and compared with the specified tolerance.

Also ensure that the calipers have no partially seized pistons and that without pedal pressure the pads can 'relax' and move fractionally away from the disc

The Brembo braking system fitted by Jaguar doesn't offer any significant real-world advantages over the standard set-up other than looking good behind the alloy wheels. They unfortunately are also very expensive to maintain and have a much shorter service life.

X-Type Buzzing Noise

I've recently purchased a 2002 automatic X-Type V6 that has only covered 23,000 miles and it drives like a dream. The only problem I have is that I can hear a very slight buzzing noise coming from the dash area with the ignition key removed. I've had no problems with flat batteries etc. My local Jaguar dealer mentioned that a diagnostic tool may find the fault, but this all sounds rather expensive if it's the norm.

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How long does the noise last? Some of the electronic systems in these modern Jaguars can take up to half an hour to shut down once the car has been switched off; the X-Type in particular is very hard on batteries.

Any noise that remains constantly should be investigated, either with a diagnostic tool or the old fashioned way — dropping the trim panel and tracing the sound to its source.

Mk 2 Footwell Water Leak

I have a 1965 Mk 2, which leaks water into the footwells when it rains. I have checked and sealed the windscreen but to no avail. Does the cold air vent/scuttle have a drainage hole that could be blocked?

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The Mk 2 does indeed have a plenum chamber (below the scuttle vent) drain tube; it is a small pipe protruding from the bulkhead beneath the heater unit fan motor. If water builds up in the chamber it will eventually run back into the car via the ventilation system; in some cases, the bottom of the plenum chamber itself can rust out, with similar symptoms.

XK8 Steering Vibration

I have bad steering wheel vibration at 70mph. The dealer went rebalanced everything, but without success. The car was then tested with a completely different set of wheels, but the vibration was still there. The dealer used the latest laser wheel alignment check, but to no avail.

Another Jaguar specialist has had a look at the car and completed all the same tests and said that there is a steering wheel vibration at 70/80mph, but cannot find the problem. Discs, bearings and bushes have all been double-checked.

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There is a chance that the wheel hub itself is distorted slightly. If all else fails, try a replacement hub flange in a new wheel bearing. Also, if the early type plastic-cased lower wishbone bushes are still fitted they should be replaced with the later metal type.

XK8 Headrests and Japanese

I recently purchased an ex-Japanese 2001 XK8 Coupe and hadn't had the car long when the headrests stopped working. I was advised by my local Jaguar dealer that the headrest motors required replacing, so I organised for the work to be done. Everything was good, but then less than three months later, the same thing happened again. The Jaguar dealership replaced the headrest motors under the parts warranty, but I was wondering if you have heard of this being a problem?

The second query is actually to do with the fact that the car is a Japanese import. All the language in the car is Japanese including the warning alerts, the satellite navigation etc. Is there a way to change the language to English? There has been an attempt made to modify the language via Jaguar Diagnostics — which resulted in the suggestion that we learn Japanese!

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While we have not heard of the seat motors themselves failing, there have been several cases where the control module under the seat has developed a fault and subsequently jammed a motor at or beyond its range of travel. These modules are unfortunately programmed with the VIN of the car: this means if a replacement is fitted, they will need reprogramming.

Language is selectable via the trip meter mile/km button on the dash; press and hold the button while switching the ignition key to position II (warning lights illuminated), the current language will then be displayed in place of the odometer reading for ten seconds. Cycle through the language options repeatedly by pressing the mile/km button and then the A/B button when the desired language is shown. Exit the menu by pressing CLEAR or starting the engine. The satellite navigation will of course require a local DVD upgrade.

X308 - Best Engine?

I am interested in buying a 1998 XJ. Can you advise me which is the better engine. The 3.2 or 4.0 litre?

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Other than lacking the variable valve timing of the naturally-aspirated 4.0-litre, the 3.2 is structurally identical, achieving its capacity reduction through a shorter stroke. Performance is more leisurely than the 4.0-litre and most noticeable in stop-start traffic.

With a similar kerb weight to the 4.0 litre car, the 3.2 litre cars do not offer any real economy advantage except perhaps at light throttle cruising. Around town they can actually use more fuel. As for reliability, the 3.2 litre can suffer from all of the usual AJ-V8 problems such as water pump, timing chain and Nikasil failure, though not, of course - failure of the VVT units.

2000 S-Type Gear Lever Issue

I have a 2000 model S-Type 3.0-litre V6 with manual transmission. Could you please tell me how to remove the trim around the lever and whether it is possible to replace the gear lever knob.

Also, the gear lever itself vibrates, making a metallic sound at certain revs; can this be rectified?

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The gear lever knob should release with a quick upward pull, though sometimes it may be necessary to cut the nylon sleeve at the base with a sharp knife.

To remove the leather gaiter, first remove the knob, then apply upward force to release the top half of the console (unfortunately brute force is the only way), then unscrew the gaiter from the transmission tunnel.

The looseness in the lever may be due to a worn lower bush or linkages, both of which can be replaced without dropping the gearbox from the car.

XJ6 - Noisy Transmission

I have an XJ6 three-speed auto box fitted to my 1964 S-type, as the original DG box had given up the ghost. It has been fine for about 500 miles, but now when starting and idling there is a clunking/knocking noise coming from the front of the transmission.

I removed the starter motor and had it fully checked and serviced and it was found to be fine. When the revs are increased the knocking/clunking metallic noise disappears only to return again at idle.

I looked at the flywheel through the bottom inspection plate, all the teeth are fine, and it does not appear to be loose or bent.

All the oil levels are correct and the gearbox appears to be working fine when driving.

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The most likely cause of your noise will be a cracked drive plate where it mounts to the torque converter, a common problem with the Borg Warner model 65 and 66 transmissions.

With the front lower cover panel removed, turn the ring gear manually while looking for the tell-tale lines spreading out around the bolt heads. If the drive plate is OK, suspect a collapsed thrust bearing in the torque converter.

The following Q&A questions are from readers of Jaguar World and may be relevant to club members cars.

E-Type Sluggish Clutch

The clutch operating mechanism on my 1963 E-Type FHC is no longer working as it should. When the engine is hot, it becomes increasingly difficult to engage gears. The plan is to replace the master & slave cylinders, which as far as I know are the originals. It would seem sensible to replace the flexible hose at the same time. I should be grateful if you could advise what should be replaced.

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The fact that the problem is heat related points towards the inner liner of the flexible hose having softened and caused a restriction, so we suggest changing that as a priority.

If the master and slave cylinders are original, it is unlikely that their bores will be in a suitable condition to accept replacement seal kits, as wear and corrosion will have taken their toll over the last 53 years. Therefore, if the flexible hose proves sound, replacement will be necessary. It is possible to obtain stainless steel-sleeved, rebuilt master cylinders, but the slave cylinders are relatively inexpensive new.

S-Type Fumes in the Car

I own a twin-turbo V6 diesel S-Type. Due to fumes entering the passenger compartment, a local garage replaced the split and damaged exhaust pipes close to each turbo outlet with Jaguar adaptor kits. However, fumes still come into the car when it is stationary, although not quite so badly.

The garage has checked its work and says no leaks can be detected, adding that the joints need to carbon up. Might there be another leak or problem? Any ideas, comments or advice would be appreciated.

XXXXXXXXXXXXXXXXXXXX

There have been issues reported concerning fitting the repair kits.

It is possible that the pipes have been cut too short so that they don't fully engage with the repair kit and, therefore, blow. It has also been noted that the clamps provided with the kits do not have enough clamping force, even though the bolt is fully tightened.

Welding the repair kits on in situ is the best option to overcome both those problems, negating any possibility of exhaust leaks from the area.

Other leak sources, such as exhaust manifold gaskets, are possible, but they should be both audibly and visually apparent — the latter evidenced by sooty deposits.

Has Water Ingress Prompted XK8's Glitches?

I have a 2001 XK8 and recently cured a problem with the upper section of the door seal that had allowed water to follow the rubber seal down the A pillar and into the driver's footwell. I now have electrical problems that I didn't have prior to the water damage.

- Firstly, even when the engine is up to temperature and the interior temperature is selected as 'high', the blow coming through the vents remains lukewarm.
- Secondly, the panel containing the heated seat, traction control and front/ rear fog light switches has developed a problem. While the green backlight works on all the switches, the red indicator (which shows that the function is engaged) no longer works on any of them. However, the rear fog lights do work (even though the switch light does not).
- Finally, when I operate the relevant switches, I can hear the relays clicking under both front seats for the heating elements, but the seat does not get warm. (I have checked that none of the fuses in the box in the driver's side of the dash have failed).

Is there a common area, such as a control box, or common source that is feeding the control circuit for these functions?

XXXXXXXXXXXXXXXXXXXX

By consensus, we think there is a degree of coincidence going on and the water ingress is not necessarily the root cause of all of the problems. So, let's take each glitch individually.

We strongly suspect the heater matrix is partially blocked and has actually been an ongoing and steadily deteriorating issue that has come to light with the worsening weather and the need to dry out the interior of the vehicle. The official cure is to replace the heater matrix, but they are expensive. Alternatively, our specialists have experienced a high degree of success by removing and descaling. Soaking it in a proprietary limescale remover has proved to be very effective.

Regarding the button illumination, it is not uncommon for the LED warning lights to stop working, yet functionality of the switches to remain intact. The only remedy is to replace the switch pack. Our research efforts have yet to find a suitable replacement LED unit.

Turning to the heated seats, it is possible that the seat module has partially failed in the damp environment. First, check that the 12v output from the module is sufficient to drive a load. A simple method is to see if it is capable of illuminating a headlamp bulb. If this checks out positively, the heater elements in the mat may have failed due to mechanical wear and tear or damage to the wiring harness under and within the seat.

Charging an XF Battery

Could you please advise me about the problems I would incur if I disconnect the battery on a 2008 XF and recharged it? Also, how should I reset the systems once the battery has been reconnected?

I have looked through the manuals, but cannot find any information that helps me to decide whether to attempt the task myself at home.

XXXXXXXXXXXXXXXXXXXX

The early XF battery remove-and-refit procedure is straightforward, with few pitfalls. Observe the usual precautions: remove the -ve (negative) first and cover the battery terminal, then the +ve (positive), again insulating the terminal. Reverse to refit.

Once the battery is fully charged and reconnected you will need to set up the anti-trap windows. This is achieved by lowering all four windows, and keeping the switch depressed when they are fully down for two seconds; then raise the windows to the top and hold for another two seconds. If the one-touch function does not raise them back up automatically, repeat the process. Also, you may need to reset the clock, which is in vehicle settings on the touch screen menu.

Incidentally, later XFs have a battery monitoring module which is a small black box the size of a cigarette packet attached to the +ve terminal. These can require reconfiguring after a flat battery is removed, and refitted fully charged. The battery-monitoring system more accurately controls the alternator output and can be upset by seeing a flat battery at key off, then a fully charged one at key on.

It is also worth noting that when charging the battery on the car, or boost starting, it is recommended that the -ve connection on the battery should not be used; instead, a chassis point one metre away should be employed, to protect the module.

XJ-S Battery Requirements

I have had my 1993 XJS convertible for a couple of years, but the battery has recently given up and needs replacing. The question is, which one should I choose?

The old battery never seemed to have enough output — the dashboard lights were not very bright, but the owner's handbook does not specify battery requirements.

XXXXXXXXXXXXXXXXXXXX

Automotive batteries are defined in three ways: -

1. Firstly, their physical dimensions and terminal orientation are classified by a generic three-digit code. In the case of your 1992-onwards XJS, the correct number is 096. Many nonspecialist suppliers' listings perpetuate a common misconception that an 017 is applicable to this model range, which has led to many owners acquiring a battery that is physically too large to fit the standard battery tray and clamp. (Incidentally, the first XJ-S's employed an 088 battery, then an 075 from 1988 to 1992.)
2. Secondly, the unit's Cold Cranking Amperes (CCA) describes the amount of instantaneous current a battery can provide at -18 degC (0 degF) under heavy load (such as the engine being turned over) for 30 seconds and maintain at least 1.2 volts per cell: 7.2 volts for a 12v battery.
3. Finally, capacity is rated in amp/ hours, which indicates how long a given load will be powered for. As an example, a 50 amp-hour battery supplies 50 amps for one hour (or five amps for ten hours, or one amp for 50 hours). Note that with the ignition off the trip computer, radio and alarm are likely to consume around 0.1 amps, so the battery would last around 500 hours or 21 days before total discharge. For a car in storage, we would recommend the use of a mains trickle charger.

Example: A 700/70 battery = 700CCA/70amp/hr.
(Typical highest units will have a rating of 780/77).

As to the dashboard lights not being very bright, all modern car batteries are nominally 12 volts (actually 12.6v); any 12v battery (even that from a lawnmower) should illuminate the dash lamps at full brilliance for a certain period of time (related to capacity, see above).

Assuming your car is suffering no other electrical malady, such as poor earth connections, we suspect that your existing battery might have had a defective cell (reducing its voltage by 2.1 = 10.5v, or, rather more likely, your bulbs have internally blackened from filament deposition over the years, or the variable resistor in the panel lamp switch is faulty).

As a final thought, many find the standard XJS dash lighting less than illuminating compared to modern vehicles. In such cases help is at hand in the form of an LED conversion, obtainable from companies such as Better Car Lighting (www.bettercarlighting.co.uk).

Modern S-Type Bonnet Woes

I have a problem with my S-TYPE in that the bonnet catch has stopped working. The off-side catch works, but the near-side one fails to open. Any advice you can provide about ways to free the near-side catch would be most welcome.

XXXXXXXXXXXXXXXXXXXX

A sticky catch can sometimes be released by manipulating the bonnet while an assistant pulls the release. If, however, one of the cables has snapped, you will probably need the services of a panel shop or Jaguar specialist to open the bonnet without unnecessary damage.

Wandering XJ40

My XJ40 has developed a steering wander, most noticeable from 40mph upwards. I've had the vehicle checked at my local garage and they reported that there is no obvious play present. Additionally, the tyres are new and the pressures are confirmed to be correct. It has been suggested that the rack could be at fault, but how can it be if there is no play?

XXXXXXXXXXXXXXXXXXXX

You do not mention if the garage whose opinion you sought is actually specialists in your model. Play and wear can be masked if not checked in the appropriate fashion.

In the case of the XJ40, supporting the suspension under the spring pan (taking the load off the road spring), will allow the top wishbone bushes and all ball-joints to reveal their true state of wear. Moving the support to beneath the suspension cross member (beam) will allow appraisal of the lower wishbone bushes — by design, they allow a degree of axial movement along the pivot shaft. If the rubber degrades and softens, this travel can become excessive and uncontrolled, altering the effective suspension geometry and allowing wander.

Should they require replacement, you may well consider substituting the original components for upgraded polyurethane units (one supplier is Superflex, www.superflex.co.uk). These variants will provide a degree of handling accuracy way beyond the OE bush performance for an imperceptible sacrifice of refinement.

Another likely culprit is the four mounts attaching the suspension unit to the bodyshell. They are not easy to test; it will require stands to be placed under the front jacking points or chassis rails. This allows the unit to hang on the mounts, allowing any splitting, degradation and softening of the rubber to be observed.

To cover your specific query regarding the steering rack, its integral mounting bushes can similarly soften, often aided by oil contamination from the engine above. The torsion bar within the pinion assembly can also suffer wear — both problems necessitating rack replacement.

A related malady is worn or partial seizing of the lower steering column universal and sliding joints, cured by replacement or application of penetrating oil, as appropriate.

Finally, we assume that basic suspension geometry checks have been carried out — excessive toe-out can cause wander and instability, as can negative camber (the wheels leaning in at the top).

In the latter case, presuming all the joints and bushes have been confirmed as serviceable, it will be indicative of a distorted front suspension beam, caused either by corrosion or kerb/pothole-induced impact damage.

Stalling X308

I own a 1999 XJ8. The car will go into safe mode and stall for no apparent reason after the dash warning panel declares traction control failure, and this can occur on long or short journeys. When trying to restart the car, the fault appears on the first attempt but disappears on the 2nd attempt after which the car can be driven and will continue allowing for completion of the journey.

About a year ago the fault occurred and on this occasion the car would not start. I called upon the services of the AA. The AA man plugged his magic box into the car and declared that four faults showed, two of which he could clear and the other two were Jaguar owned, but showed that there was a problem with the fuel/air mix. The car then started. On presenting the car for investigation to the dealer, they declared that both Lambda oxygen sensors needed changing. I had to arrange a mortgage to pay the final bill!

The car has been serviced twice since then and I always mention the number of times this fault has occurred during the intervening time, but all I get from the service people is that "no fault was found" during the service. The car has completed 91,000 miles and is very good order. It drives well when fault free.

XXXXXXXXXXXXXXXXXXXX

The fact that an ABS/traction fault came up does not necessarily mean that it was the cause, it may in fact have itself been triggered by the stall.

This model can suffer a failure within the electronic throttle body, resulting in a stall, usually on deceleration. We would suggest finding a local independent specialist, equipped with aftermarket diagnostic software, which, unlike the Jaguar system, has been developed by technicians with an understanding of the various problems and issues that have arisen since the car was launched.

Lambda sensors do degrade over time and should be replaced every five years or so, but there is no need to pay Jaguar retail prices when exactly the same item from the same manufacturer (normally NTK) can be bought for a fraction of the cost if you shop around.

S-Type Gearbox Issues

An issue has occurred since the oil in my automatic transmission was changed. Sometimes there is a jerky change. Could this be too much or not quite enough fluid?

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The jerky gear change could, indeed, be due to the transmission being underfilled, or, alternatively, the transmission control module may require a reprogramming and adaption set-up to make sure the software is up to date.

MkII 2.4 Engine Rebuild

I am having my 2.4 Mk2 engine rebuilt. Stripping it has revealed score marks on the bores. I would love to keep the original pistons, and try to get away with just a hone and new rings. The engine builder thinks otherwise and strongly suggests that a rebore and new pistons are necessary. What would you recommend?

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A rebore and matching oversize pistons may be required if either bore wear (visually evidenced by a 'wear ridge' at the top of the piston ring travel) or scoring is considered excessive. Additionally, wear to the ring grooves or other visible damage, such as scuffing of the skirts, cracking, or erosion caused by detonation — commonly known as 'pinking' — may also indicate that new pistons are necessary. A physical appraisal is required, which your specialist has obviously undertaken. If you trust their reputation, it would probably be false economy to ignore the advice.

Another advantage to having a rebore and oversize pistons is a slight increase in capacity, and hence performance, which is always welcome on the 2.4. Jaguar. You do not state if your desire to retain the existing pistons is triggered by originality or economy. If it is the former, it is possible to re-sleeve (liner) the bores back to standard dimensions and finish.

S-Type Diesel Car Fumes

I have a 2007 S-Type 2.7 TD auto. I have an ingress of fumes into the passenger compartment. I thought that maybe the diesel engine heater was the culprit, but eliminated this possibility by pulling the fuse.

I then reasoned that it could be emanating from the exhaust joints, but we have had it up on a ramp, removed all the covers and there was no sign of leakage. However, I still get an exhaust-type smell in the car when it is stationary. If I turn the heater off, though, it's fine: no fumes!

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As you have checked the most common areas, the next likely cause is hairline cracks developing in the flexible joints between the catalytic converters and turbochargers. The resultant exhaust fumes are drawn in by the heater and spread around the interior of the car. There are catalyst repair kits available which require a couple of hours of your time to fit them.

If that is not the problem, check carefully for injector leakage. Fuel residue can collect in the well of each cam cover/intake manifold, evaporate off and result in a similar end result.

XJ12 Suspension Bolt



I am undertaking a concours rebuild on the front suspension unit of my 1977 XJ12 coupe. To complete the project, I need a pair of the domed head outer bolts securing the top ball-joints to the wishbones, which I have tried to obtain without success.

I cannot understand why a conventional hex-head bolt was not used as there appears to be sufficient clearance in situ. Can I substitute them for the original items? I recall standard headed bolts being used on a Mk2 that I restored some time ago.

XXXXXXXXXXXXXXXXXXXX

The curvature that the Jaguar suspension designers applied to the bolt head was to avoid the neat groove that a standard bolt would machine into the inner face of the brake disc if the wheel was rotated on full steering lock and maximum suspension 'droop'.

It is an unlikely scenario on the road (except in extreme cornering situations), but is possible in a workshop when on axle stands or a wheel-free ramp. Some time ago, these unique bolts (part number C29890) went NLA (no longer available) from Jaguar. Quoting that number might assist you in tracking down NOS (new old stock) originals lying in the back of someone's parts bin. The David Manners Group (www.jagspares.co.uk) has reproduction bolts to a high OE (original equipment) standard, so are also worth a try. ■

The following Q&A questions are from readers of Jaguar World and may be relevant to club members cars.

Cabin Comfort: XKR or XJR

I'm contemplating the purchase of an XKR coupe, but am concerned that although it does have back seats there may not be enough room for our two young children aged two and seven months, together with all the necessary gear for a day out.

Also, what upgrades are available to further boost the performance?

XXXXXXXXXXXXXXXXXXXX

The boot space in an XK8/R is actually quite reasonable, and is claimed to take two sets of golf dubs. Your problem will be fitting the child seats as the back seat of an XK, even without a child seat fitted, is very short in the cushion. This, coupled with minimal legroom, will normally prevent any child sitting comfortably with adequate leg space, especially if the person in the front seat is reasonably tall.

As an alternative, why not consider an XJR saloon which is just as quick? Not only will it seat four in comfort, but with lower average values you should be able to afford a newer model, with a steel lined engine and no Nikasil to worry about.

All of the usual XKR upgrades such as the larger crank pulley, improved induction and free flow exhaust will work just as well on a saloon.

Rattling Series 1 XJ6

I have recently begun to hear a strange rattling sound from behind the back seat of my 1972 XJ6 4.2. I have cleaned the boot out and made sure the spare wheel and toolkit are secured, but nothing has worked as yet. One curious aspect of the problem is that it only seems to occur when the windows are closed and the heater fan is running.

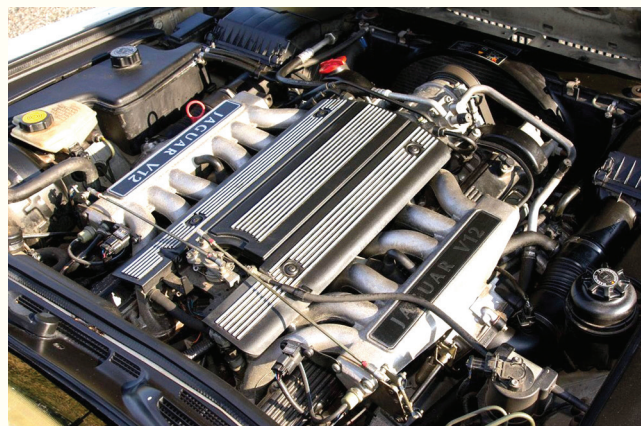
XXXXXXXXXXXXXXXXXXXX

There is an air extraction vent mounted under the rear parcel shelf which discharges into the low-pressure area at the top of the boot lid recess (visible when the boot lid is open). To prevent exhaust fumes being sucked back into the cabin when the windows are open, a row of foam-covered metal flaps act as a one-way valve, but over time the foam breaks down and the flaps start to clatter and even fall off once the fabric strip, used as a hinge, begins to tear.

DIY repair with new foam and tape is not difficult; in fact, the hardest part is normally separating the tray assembly inside the boot, as once unbolted it often remains stuck fast with semi-hardening sealant.

XJ-S BHP Figures

I live in California and have a 1994 6.0-litre XJ-S, I know that the published horsepower and torque increased from 1994 to 1995 on the V12 engine. My car is a later year 1994, so do I have the 1994 horsepower of 278 or the 1995 horsepower of 308? Also, what added the extra bhp from 1994 to 1995?



Our figures only cover UK market cars, and show the Jaguar 6.0-litre engine at 308 horsepower for its entire XJ-S run. There was, however, an earlier TWR 6.0-litre engine (unrelated) that started at 318bhp before increasing to 338bhp in 1992.

US spec engines can at times be less powerful than those in the UK due to differing emissions legislation, particularly in California, and a change in emissions spec could be the reason for the 1994/5 increase. There was also a change in the exhaust design, which would clearly have some effect on the official outputs.

X-Type Gear Selector Jam

I have a 2002 X-Type 2.0-litre which has done 30,000 miles. The automatic gear selector jams in park following a run and will only release once left to cool down for approximately 30 minutes. This problem seems to occur after about 70 miles when the car is warm — the locking mechanism produces quite a loud click on pressing the brake pedal.

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There are normally two common reasons for a gearshift interlock to fail: the switch at the brake pedal or the lock itself. These locks, though audible, should not be excessively noisy, and this could be an indicator as to the cause of problem. Our approach would be to check the switch first, as it is easy to get to, then go for the lock if necessary.

X350 Headlight Condensation

Last year, I had both dipped-beam lamps (Xenon type) replaced on my 2006 X350 Jaguar when they started to dim and go pink in colour. It was not a cheap job - I was told that the front bumper had to be removed. Over the last couple of months, a lot of condensation has built up in both nearside headlights. This week, the replaced bulb suddenly failed due, I suspect, to the presence of moisture.

So, can you advise me if it is really necessary to remove the front bumper to carry out this replacement? Also, what is the best way to dry the lamps out, and how can the problem be prevented?

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This problem is relatively common on the XK but rare on an X350, which is little comfort to you. However, the cure may well be simple.

There are small moulded-rubber vent tubes on the back of the light units, which may have been knocked off or fitted upside down — they should all point downwards. That being the case, having rectified them, careful use of a hot-air gun directed through the bulb access covers should dry the units out.

If the problem recurs, it is unfortunately indicative of a fault with the body of the lamp housing, which will necessitate replacement. The bumper requires removal to change both lamps, but it could be partially peeled back to replace just one unit, which is very easy when new, but something of a pain if the fixings are rusty. In your case, the prior removal should ease your passage through the operation.

X-Type Oil Leak

Ever since I replaced the oil in the transfer case in my X-Type, I have had problems with oil coming out and dripping on the exhaust. When I stop at traffic lights, the smoke gets pulled into the car through the climate control — and it smells bad.

I followed the procedure in the Jaguar manual to jack one side of the car up so that the bottom of the sill was 24in off the ground, and then fill the transfer case with oil and put the plug back in. I originally thought I had jacked it too far and overfilled it, so I double-checked the height and drained some oil out.

The oil appears to be coming from the breather vent and out of the half-shaft seal, then draining down. Since the breather is nearly impossible to get to, I just tried to clean it by spraying brake cleaner fluid on it, but that hasn't stopped the flow of oil. Should I drain some more out, or is there a known fault, such as leaking axle seals?

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Our specialists never use the technique you have employed, citing too many possibilities for error. Instead, the method they recommend is to fully drain the case and then refill with exactly 500ml of oil. If the transfer box was overfilled with a blocked breather, pressurisation can occur, which would damage the seals necessitating their replacement, and that is only possible by removal of the complete unit — not a job to be envied.

Alternatively, if the breather is operating correctly, it is likely that the oil will find its own level and the problem will cease of its own accord.

Mk 2 Overdrive Issue

My 1962 Mk 2 has a problem with the overdrive after it gets hot, especially in hilly terrain where it cuts out when driving uphill and cuts back in going downhill. But when driving on level road and at constant speed it works fine.

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This could be a case of the oil either being too thin, or of insufficient quality to maintain viscosity when hot.

Try an oil change with a good quality SAE 30 oil (that does NOT contain friction modifiers), as well as checking the solenoid adjustment and the electrical circuitry to the overdrive box.

If none of this works, or metal filings come out with the old oil, it's going to mean a professional strip down to check the clutch lining and pump operation.

XK8 Climate Control

I own a 1997 XK8, where the centre panel cabin temperature indicator light does not work, (possibly the bulb) and the A to B trip selector on the dash is stuck in the 'in' position. How do I get in to replace the bulbs and also sort out the trip selector?

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To access the climate control illumination, first unclip the J-Gate surround, followed by the trim around the switch panel, then unscrew the climate/audio assembly and pull it out enough to loosen and withdraw the climate panel; the bulbs should then unclip from behind.

To remove the trip switch first drop the lower dash trim panel, followed by the two screws at the lower edge of the veneer panel. This should then unclip and bring with it the switch unit, which can then be unplugged and removed.

S-Type Engine Failure

I have a 2006 S-Type 2.7D, owned from new, with full Jaguar main dealer service history. I recently started the engine without problem and drove two miles, whereupon it suddenly stopped: no bang, no high temperature indicated, no warning lights or messages.

I had it recovered to the dealer I originally purchased it from, and where I have had it regularly serviced ever since. After a few days, the dealer told me that the crankshaft had seized and the quote to replace the engine was twice what the car was worth.

Even with relatively low mileage (59,000 miles) and kept in immaculate condition I doubt if it is worth repairing. What options can you recommend please?

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The 2.7 V6 diesel engine is usually regarded as a very reliable and long-lived unit, hence a major failure at the comparatively low mileage of 59,000 is out of the ordinary. It may be worth canvassing the views of your specialist as to a likely reason for the malfunction.

High oil level may point to fuel contamination, possibly indicative of an engine management fault, which will need to be addressed concurrent with engine replacement to avoid history repeating itself.

Unless you have some plan to keep your car indefinitely, an engine replacement is simply uneconomic. However, as the years pass, truly immaculate S-TYPES displaying low mileage, and hence unworn trim and the like, are getting harder to source, so we suggest that the most cost-effective solution is to obtain a warranted, used engine from a reputable Jaguar wrecker.

XJ-S V8 Transplant

Can you tell me if a later model 4.2 supercharged V8 and its six-speed transmission can be adapted into a six-cylinder 1996 XJS?

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While the physical installation of the powertrain is within the ability of a competent enthusiast (after all, the XJ-S engine compartment was designed to house the bulky V12), you may find the electronics more of a challenge. Not only are the engine and gearbox electronically controlled via ECMs, but also these same units are fully integrated with many other functions of the original donor vehicle — such as security and body control modules.

The best way to achieve your desired end result is to acquire a complete donor car and transplant as much of the wiring loom and associated control systems as possible — addressing individual interface problems as they arise. The controller area network (CAN) is the wiring system designed to allow all microcontrollers and devices fitted to the car to communicate with each other. Faults with this network will be the most difficult aspect to get right as the engine and transmission will be looking for signals from such diverse sources as ABS modules and the instrument pack. If these communications cannot be established or simulated correctly, the Restricted Performance or Limp Home modes will activate — hardly conducive to high-performance motoring.

Alternatively, fitting the engine with a programmable aftermarket engine management system, and adapting a transmission control module could well prove to be a simpler solution. The adoption of a manual transmission would avoid the latter problem.

X300 Erratic Idle Speed

My 1995 3.2-litre X300 Sovereign idles at 1,500rpm. It had been adjusted back to 800rpm, but within two days returned to 1,500rpm. It occasionally drops to 1,200rpm or 800rpm for short periods, then returns to 1,500rpm. Air temperature, engine temperature or humidity do not relate to this behaviour. I think it's an unreliable sensor but, if so, which one? Also, where can I get a reasonably priced replacement clock?

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Erratic idle speed is a common X300 problem, and in most cases can only be cured with a replacement throttle housing and stepper motor. Cleaning out the old components can temporarily fix things, but it rarely provides a permanent solution.

Please be aware that the replacement components will almost certainly need setting up electronically with an appropriate diagnostic tool, so it's not really a DIY job.

X- Type Heater

My 2.0-litre diesel X-Type has digital temperature control, but I can't get any hot air out of the system. My usual mechanic who is not normally beaten has given up, and I am left with taking the car to the local dealer, but am loath to instigate a round of new part fitting as part of a fault-finding exercise.

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Working through the common trouble spots, check first that the coolant level is correct, then trace the heater pipes to and from the bulkhead connections and the control valve, feeling for warmth both going in and to a slightly lesser extent coming back out, when the system is switched to full heat.

Should these checks not isolate the problem, the car will need to be connected to a diagnostic computer which has the ability to read fault codes from the HVAC system.

XJ Series 3 Sunroof Woes

I own a 1985 Series XJ6 Vanden Plas that still runs like new. Each winter, I store it in an unheated warehouse and remove the battery. After re-installing the battery, the sunroof would not respond. It worked before I stored it. I've been pulling all my fuses to check the condition and the surfaces, as well as the fuse holders. I am unable to find a fuse that indicates it serves either the roof switch and/or the motor for the roof. Can you help?

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Prolonged exposure to damp conditions can play havoc with a cars electrical system, creating a thin layer of corrosion on the various contacts and causing a multitude of obscure problems. For that reason we would have to recommend that if a car is to be stored over winter it should be done in a dehumidified garage or using a ventilated inflatable enclosure such as the 'Carcoon.'

The sunroof on a Series 3 does not have a fuse, but instead uses a thermal cut-out to protect the circuit from overload, as do the electric windows and these rarely give trouble. Instead, we would suggest you start at the console switch, by swapping over a window switch that is known to work. All of the remaining componentry, including the motor, is located behind a removable trim panel at the back of the boot. The toolkit should include a manual winder for the sunroof which can be used to check that it is not physically seized, though this is unlikely.

X308 - Auto Headlights

My X308 Daimler Super V8 has a headlight problem. When I have the headlight switch set on 'auto', the lights do automatically come on and off as they should depending on ambient light levels, however when the headlights are automatically on, and I then move the left-turn indicator switch, the headlights momentarily turn off before coming back on again. When engaging the right-turn switch they remain on as they should.

It's too big a job and too expensive to replace the total headlight switch for trial-and-error diagnosis.

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It certainly sounds to us as if the problem lies in the switch assembly or an associated earth circuit. Unfortunately, in this case the only way to tell would be substitution, even if only to the extent of plugging another stalk into the loom without physically removing the existing one.

All X308s with auto headlights should share the same stalk, and as they don't commonly fail a second-hand one should not be too expensive.

XF 2.7 Diesel Engine Failures

I have owned an XF 2.7 diesel for seven years and I was surprised to read a comment in Jaguar World that failure of the 2.7-litre diesel engine was becoming a common problem. What are these failures and what can be done to avoid.

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We spoke with a car wrecker who said they can't get enough good condition 27D engines for customers, so failure appears to be a problem, although mainly with vehicles fitted with a diesel particulate filter (DPF).

An engine re-builder advised us that once the engine is at operating temperature and having met a pre-programmed criteria monitored by the ECU, it will automatically, if required, start a DPF regeneration routine. The cycle takes an average of about 25 kilometres to complete, providing the vehicle maintains a speed of 60kph-plus and, on the XF models, has more than a quarter of a tank off fuel.

They recommend regularly checking the oil level, being sure that the level does not rise above the max mark. This is due to the mixing of fuel with the engine oil. This is particularly a concern during active DPF regeneration, where extra fuel is injected into the exhaust stream to raise the temperature and burn off soot. If some of this unburned fuel seeps past the piston rings and contaminates the engine oil, it can thin the oil, leading to oil dilution.

To mitigate this risk, it is recommended to take longer trips to allow the engine to reach operating temperature and to use synthetic oil that is more resistant to thinning. Regular oil changes and addressing any engine issues promptly can also help maintain the engine's health and prevent oil dilution.

It is also recommended to only use genuine oil filters. The oil filter has a small nipple and O-ring, which is designed to retain oil inside the filter housing when the engine is switched off, as the filter is at the top of the engine. Incorrect fitting and poor-quality filters lead to oil starvation on startup. Some non-genuine oil filters have an inadequate nipple, which ultimately leads to premature engine wear.

END

The following Q&A questions are from readers of Jaguar World and may be relevant to club members cars.

E-Type New Build

Is it feasible to build an E-type from spare parts with no donor car? The reason for my question is that after reading articles in Jaguar World, in order to achieve my goal of owning an E-type, I realised that not only would I have to buy an expensive car, I would probably have to fix much of the metalwork and then replace many items to bring it up to a good modern standard. I haven't been able to figure out which is cheaper.

XXXXXXXXXXXXXXXXXXXX

The quick answer to this is that even though it may be expensive, buying the best car you can find will in the long term still be the cheapest option.

Even if all of the various parts were available new (and many are not) you would still need an original identity in order to register the vehicle, and that would mean buying a total wreck at the very least. Then the replacement shell would need considerable preparation and painting which can cost many thousands of pounds to do properly, followed by the task of sourcing and reconditioning where necessary the drivetrain, trim and ancillary parts.

XJ40 V12 - Idle Speed

I recently purchased a 1993 6.0-litre XJ40 V12 which had sat unused for two years following the death of its owner. The car is in very good condition and started instantly on fitting a new battery, but unfortunately it wants to rev at around 1100rpm cold and then fluctuates between 900 and 1500rpm when warm.

My local dealer suggested replacing the air intake temperature sensor, which made no difference. The VCM is showing no fault codes and a mechanic has said that it might be the air-flow meter, but I am unwilling to spend further money without a more positive diagnosis.

XXXXXXXXXXXXXXXXXXXX

These are the classic symptoms of the cold start auxiliary air valve (located at the back of the left-hand cylinder head) seizing and failing to close off as the car warms up.

This valve is entirely mechanical and so won't bring up a warning message when it fails. Replacement valves are widely available and relatively easy to fit, though the coolant level may have to be lowered slightly as the valve has a temperature sensing bulb that protrudes into the water rail housing.

Modern S-Type - Erratic Idle

While at the traffic lights in my 2000, 3.0 V6 S-Type, the engine started to hunt up and down and eventually stalled. I found an air leak on the connector (that looks like an HT lead cap with an elbow on the top) at the back of the right-hand bank, but, having replaced it, the fault remains. I have heard a hissing from the throttle body when the ignition is turned on, but it stops when the plug is disconnected from the right-hand side. Do you have any ideas as to what to do next?

XXXXXXXXXXXXXXXXXXXX

This problem is indicative of an intake air leak (a diagnostic read-out showing lean codes for banks one and two would confirm this supposition).

There are a couple of breather hoses that cause issues, and they all need to be checked. If one has failed, there may potentially be others. A usual scenario is that one collapses and starves air to the rest of the system, rather than actually creating an air leak. The other breathers can continue to deteriorate, and even split, without necessarily causing extra air to enter the inlet.

When the one at the top fails (which is near the throttle body, about 200mm long and 20mm in diameter, stepping up to about 30mm at the rear end), you get hunting. It is usually visually obvious that this hose has collapsed and split, and is easily replaced, but the symptoms can remain due to the breather hose under the inlet manifold suffering similar problems. It is easily diagnosed with a can of WD40 — you will see the fluid being sucked in — or by using a length of hose as a makeshift stethoscope.

Once you have located the leaking breather, the fun of removing the manifold and the injection rail begins. The most common culprit being buried in the centre of the V.

XK8 Rear Parking Sensors

I have a 1997 XK8 coupe. Can you tell me if it is worth fitting rear parking sensors to the car? Where would I go about getting this done professionally, and would it require an entire bumper respray?

XXXXXXXXXXXXXXXXXXXX

Parking sensors are a worthwhile option and Jaguar specialists do offer a fitting service. The bumper should not need to be repainted (though the sensors themselves can be painted for a more integrated appearance), but it must be stated that due to the complex curves of the XK8, fitment is not as straightforward as on other Jaguar models.

X308 Engine Fault

I own a 1999 X308 4.0 Sovereign with 50,000 miles on the clock. Over the last two months a recurring fault has developed; suddenly the red and amber warning lights illuminate, together with the alternating messages — traction control fail / stability control fail / restricted performance — and I am reduced to around 35mph. I then stop the car, turn the ignition off and then on again and everything is back to normal for days or weeks.

I have cleaned the throttle butterfly area, ABS pump electrical connectors and inspected the wiring to the ABS sensors and all seems fine. Your advice would be appreciated.

XXXXXXXXXXXXXXXXXXXX

Your problem is most likely to lie within the throttle housing, as this is one of the most common V8 problems we have encountered.

Unfortunately, cleaning the butterfly area rarely produces a permanent fix and a new housing assembly is almost always needed. The housings may be repairable, but we have not yet heard of anyone marketing a changeover unit.

A diagnostic computer, either Jaguars own, or 'Opus IVS', will be needed to reset everything once a replacement has been fitted. We would recommend calling your nearest independent Jaguar specialist.

S-Type - Check Engine Light

My modern 3.0 litre S-Type auto with 56,000km recorded is indicating a malfunction via the dashboard "check engine" light.

The car seems to be in order in every respect apart from an occasional slight 'kicking' in the drive response as if the fuel injectors were 'sticky', or perhaps an ignition problem. This issue seems to occur when the car hasn't been used for a week or two, and when driven soon disappears.

However, the malfunction icon which would occasionally come on and then disappears, now stays on. As everything appears in order, I drive the car as if there wasn't a problem. I fear that putting it in for investigation would cost a lot without correcting the condition. Could you offer an explanation?

XXXXXXXXXXXXXXXXXXXX

The 'check engine' lamp is illuminated constantly because an emissions related fault has occurred frequently enough to trigger a fault code in the car's computer.

This code can be read with any OBD2 standard diagnostic unit, and from our experience can often be a slight misfire caused by a faulty coil pack. All modern Jaguar specialists should be equipped to diagnose your problem.

X308 Key Fob Issues

Some days ago, my car, a 2002 X308 model with 49,000 miles on the clock, stopped responding to the key fob buttons and none of the four functions worked at all. Having bought new batteries I tried it at very close range once more before fitting them and found that all worked perfectly, indeed it worked at what you might term normal ranges.

Five days later it stopped working again so I fitted the new batteries, but this has had no effect. The locks and alarm work when using the key, which I can live with for the time being but there is absolutely no response when using the fob.

Is it likely to be the fob or something on the car that is at fault, and if it is the fob is there any way of reprogramming it short of a trip to a local dealership?

XXXXXXXXXXXXXXXXXXXX

The key fob would have lost its programming when the batteries were replaced. Fortunately, on a V8 it is only the key that needs to be reprogrammed by a dealer (or specialist), as you can reprogram your own fob(s) via a sequence involving the headlamp flasher and one of the dash lights — full instructions will be in your owner's manual.

X350 Mute

My 2003 XJ X350 has lost its voice. There is no sound from the radio, sat-nav, or voice command. My main dealer says it is an expensive module with a 2-hour labour charge + VAT. At that level I am inclined to have ago myself. I have some ability and know others with more.

Where do I start? Is this module behind the sat-nav screen, if so, how do I recognise and access the unit? I am hoping that once found, I can either repair the component or fit a used module.

XXXXXXXXXXXXXXXXXXXX

The X350 has a networked computer system requiring all of the various modules to be programmed with the vehicles VIN number and specification, so fitting a second-hand unit from another car is therefore unlikely to work and certainly not a job to be attempted at home.

Do bear in mind, though, that an increasing number of independent specialists are equipping themselves with dealer level diagnostic and programming equipment, so it would pay to make a few calls before authorising the work.

XJ40 Battery Problem

I own a 1989 XJ40 Vanden plas, with a reoccurring dead battery and its getting to the point that I'm thinking of getting rid of the car, because I can't be sure it will start when I need it.

The car has fairly low miles (84,000) and It does have many of the famous quirks of this series, including the intermittent dash lighting (requiring a 'thump' on the dash), but the car runs well despite these electrical issues.

If I forget to plug in the 'battery tender' recharger, the battery goes flat in ten days or so and of course that ruins the battery. I'm getting ready for my second battery in two years. I am thinking about a 'priority start' battery minder that will automatically disconnect the battery if the drain endangers the battery as a stop-gap measure, but what I'd really like to do is to fix this.

XXXXXXXXXXXXXXXXXXXX

An unfortunate side effect of modern technology is that power drain is becoming a serious issue; an S-Type can take up to half an hour to power down once the ignition has been switched off, and then, many struggle to maintain a useful charge, even for the ten-day period you give.

Of course, no battery would give its best if the car hasn't been driven sufficiently to keep it fully charged so try and avoid too many short journeys.

A good battery conditioner, as I suspect your battery tender' is, should not just keep the battery charged, but also periodically drain and recharge it in a simulation of normal use, because even a battery with no drain will deteriorate without any use.

XJ12 (S3) Cruise Control

I have a 1987 Series 3 XJ12. The cruise control sometimes works and sometimes doesn't. I have checked the bellows and put two large jubilee clips to hold the rubber bellows on to the metal ends but this has not helped. All pipes and cables seem to be OK.

What do you think can be the problem? I also changed the control unit as well to no avail.

XXXXXXXXXXXXXXXXXXXX

The cruise control fault is still likely to be a split vacuum hose with air leakage into the bellows which rely on a perfect seal to work.

To repair, remove the end plates and clean everything thoroughly before refitting and sealing them in place with silicone sealant. While it is possible for a solenoid or switch to fail this is rarely the case.

XJ-S V12 Ignition Fault

I am the owner of a 1992 XJS convertible (V12) and for the second time I have had a fire in the catalytic converters. The first time the ignition coils had to be renewed together with both catalysts. The second time, which happened only approximately 1200km later, it seems that only the left-hand catalyst was on fire, as only this one was burning red.

Do you know what could be causing this error? The only fault code produced was FFI 3. It all happened during open road driving when the power suddenly dropped.

XXXXXXXXXXXXXXXXXXXX

This certainly sounds like an ignition related fault, and one which may have caused the earlier failure of the coils as well. The car essentially has two separate ignition systems, one for each cylinder bank, but with both running through the same distributor via a two-tier rotor arm and a distributor cap with two concentric rings of plug lead terminals.

Both the arm and the cap are made from poor quality materials, and it is most commonly the right-hand catalyst that fails first when the portion of the rotor arm sending current to the right-hand bank shorts out to the distributor shaft, causing the catalyst to fill with unburned fuel.

Unlike that for the right bank, the left bank portion of the arm is fed not by the usual spring loaded carbon brush, but a brass ring in close proximity to the coil lead terminal, thus setting up a permanent arc; were either component to distort and increase the gap, or dampness provide a path of lower resistance, the arc would fail, along with all the plugs in that bank.

With the V12 firing order being that of two separate six-cylinder engines, the loss of one entire bank wouldn't cause any of the conventional misfire symptoms, only a proportional loss of power; not something that would be noticeable when cruising under light throttle.

The code 'Fuel fail 73' (FF13) relates to the manifold pressure sensor and would almost certainly have been triggered by the ignition fault.

X300 Central Locking

I own a 1994 X300 4-litre Sovereign, and am having a problem with intermittent door locking/unlocking while travelling. Can you offer any suggestions?

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This problem is not uncommon and is usually traceable to a sticky latch assembly, which will need to be replaced. To isolate the latch in question it may be necessary to remove the door trims, operate the locks and look to see which one is stiffer or more sluggish than the rest.

S-Type - Rear Disc Brakes

I would be obliged if you could tell me the procedure for replacing the rear brake discs and pads on my 2005 S-Type 4.2 Sport with electronic handbrake.

At a recent service I was informed that the discs were corroded on the inside face and the pads were around 70% worn?

XXXXXXXXXXXXXXXXXXXX

Unfortunately, the rear pads and discs cannot be replaced without first disabling the electronically controlled handbrake mechanism, and this can only be done with a diagnostic computer.

Jaguar does supply dealers with a manual switch for emergency use, but even then, the entire boot lining must first be stripped out in order to access the plug. Sadly, in recent years, even replacing the brake pads has become a job for a specialist.

S-Type - Rear Brake Pads

My S-Type Sport has to date covered only 13,700 miles since my last brake service, and so I was surprised when my local Jaguar dealer advised, when servicing the car, that the rear brake pads had only 1,000 miles of wear left.

Is this degree of wear usual at such low mileage? On my previous cars I can hardly recall replacing the rear pads at all, and certainly never at 13,700 miles.

XXXXXXXXXXXXXXXXXXXX

This is a common complaint with post 2002 S-Types which have an electronically controlled handbrake.

Occasionally, even when using a diagnostic computer to disable the mechanism correctly, it fails to recalibrate to the new, thicker pads and brake drag can result, leading to premature wear.

A Technical Service Bulletin was subsequently issued containing instructions on how to manually calibrate the system when necessary: -

1. Reset EPB module by disconnecting the battery for 30 seconds
2. Start engine
3. Firmly apply and release the foot brake five times
4. The message 'not calibrated' or 'apply foot brake' should appear to indicate the system is in calibration mode
5. Lightly press the foot brake pedal
6. Apply handbrake using electric switch
7. Release the handbrake
8. Release the foot brake
9. Confirm that the brake warning lamp is no longer illuminated and that the 'not calibrated' message is no longer displayed
10. Apply and release handbrake five times to test the system.

XJ40 Steering Rack Problem

I have a 1992 XJ40. Lately I have had trouble with the steering rack, from hydraulic leaks to vibrations, and despite reconditioning the rack these symptoms persist.

The recommended replacement would require new hoses and a later steering column to be fitted.

XXXXXXXXXXXXXXXXXXXX

A reconditioned rack should not leak, but if one does it should be covered by the warranty. Be aware that most racks are supplied on a changeover basis, so it is unlikely that the rack now in your car is the original. Also, reconditioning usually only extends to the seals and bushes, so if the main components are worn no amount of overhauling will fix the problem.

We would advise you contact the workshop/ supplier and ask for another rack, but first ensure that the leak is not in fact coming from the hydraulic pipes (which is very common) or the pump itself.

Vibrations, on the other hand, can usually be traced to a poorly aligned high-pressure pipe or even one that has been incorrectly repaired with steel braided hose. A worn pump can also cause vibrations.

It should be possible to sort your problems without resorting to the expense of a new rack.

Daimler V12 Fuel Sender

I have a 1987 Daimler Double Six. When I fill the left-hand tank, it still shows empty. The right-hand tank is alright and shows full and empty as it should.

I have fitted a new tank sender unit and it remains faulty, but if I take the tank unit out and move the arm to empty and full it registers on the gauge. Can you tell me what is wrong?

XXXXXXXXXXXXXXXXXXXX

While the sensors cannot be fitted upside down, they do have offset arms and so can foul the tank wall when fitted either on the wrong side or with the float clipped in the wrong way round.

Fouling can even occur when the correct sensor is fitted to a tank that has been internally sealed with resin - so tight are the clearances.

END