Things to consider when buying a Ferret

1. **Are you legally able to drive it on the road?**

   Has the vehicle been registered for road use? The Ferret, even a Mk 1 without a turret can weigh over the 3.5 tonnes gross vehicle weight, or maximum authorised mass (MAM), and if your licence was issued in 1997 or later, you need to check that you don't need to take an upgrade category C1 test. If the vehicle was manufactured before 1960, you should be OK, for these are exempt from the 1999 regulations. The age of the vehicle can be checked against the Army registration number and the vehicle data plate inside the fighting compartment. The Bovington Tank Museum library can also help you with vehicle records and history for a nominal fee.

2. **Is the noise level of the Ferret acceptable?**

   Although they sound quiet from the outside, on the inside - particularly in a Mk 2 turreted version - the Ferret is very noisy. This is because there is no bulkhead between the driver and the engine/gearbox. Also, the bell-shape of the fighting compartment and turret focusses the sound around the driver. I am hard of hearing, so have to take particular care of my ears. The headset intercom offers protection, but if you are driving it solo without a 'top commander' as passenger, use ear defenders particularly for long journeys.

3. **Have you got somewhere to store it?**

   My garage is 84 inches across the entrance, and 8 foot 4 inches inside for a 6 foot 3 inches wide vehicle. I wouldn't want to drive into a narrower garage, or one with a narrower entrance, for parking requires some time spent lining up before driving in. You'll need a space at least 13 feet long. Ideally, you'll need 8 feet 6 inches height to open the hatch inside the garage. If you have to keep the vehicle outside, you'll need a tarpaulin at least 4 x 6 metres (13 x 20 feet) with good lashing eyelets. If you have to pay for storage, the minimum cost will be around £60/month.

4. **Can you afford fuel, maintenance and running costs?**

   Petrol works out, roughly, at about £1/mile. Lubricants SAE30 and EP90 GL4 about £60/year. You'll use more extreme pressure gear oil EP90-GL4 than SAE30 engine oil. The maintenance and spare parts work out as about £600/year, but this can vary widely. These are merely my costs, for the most part replacing wheel stations over a three year period. There's no tax or MOT costs, but you have to maintain the vehicle in a roadworthy condition to MOT standard. Insurance is around £100/year. I allow about £150/month as fair running costs, without considering storage costs.

5. **Have you got access to spares?**

   Like any classic vehicle, whether it be a Spitfire, an Aston Martin or a humble Ferret, it won't work if you don't have the correct parts to maintain it, even if you have calculated that you can afford to do so. Since the Army started releasing Ferrets onto the civilian market over 20 years ago, the availability of parts has diminished. It is possible to copy and remake many items, but this needs good engineering workshop and fabrication facilities. New Old Stock (NOS) is advertised for sale on ebay, but check that it is genuine and actually intended for the FV701 Ferret and not another design of armoured vehicle. The seller's description may well not be accurate. Of the dealers listed on this website, stock is rotated between them, and it can often be hard to source. Some Ferrets get sold on for spares. Currently getting 9.00 x 16 Dunlop track-grip runflat tyres is impossible, and bar-grip alternatives, whilst not strictly authentic, are fitted.

6. **Can you do the maintenance, or have a good mechanic**?

   You do have a responsibility to keep the vehicle road legal. Bear in mind that the Ferret is a very compact vehicle. For example, to get the gearbox and fluid flywheel out you have to take out the radios, radio tray, and commander's seat, and preferably the turret. Have you got a lifting crane for the engine/gearbox? The alternative is to low-load the Ferret to a maintenance or repair depot.

7. **Are parts missing or broken?**
   The engine hatch cover hinges and the turret door hinges are prone to seizing and, in the worst case, snapping off if they are not oiled and maintained. If you are going to drive this vehicle you need access to the engine bay. The condition of hinges, as well as the condition of the knuckle-joints on the two side vision hatches, will indicate whether the vehicle has been neglected and/or left outside for a long time. Although they can be fabricated, it is difficult to get genuine replacement bins, especially the long side-bin. Smoke discharger covers are also rare, but Clansman radio parts are still fairly widespread.

8. **Has the vehicle got all its accessories?**
   This is important, because as stock gets rarer replacing items such as side bins or having new copies made, will push up the costs over and above the basic price being asked for the vehicle. A fresh paint job can quite literally cover things up. Paying the top market price for a well-maintained good condition Ferret can save money over restoring and 'topping-up' a poor condition wreck.

9. **Buy your Ferret from a trusted source or reputable dealer**

   I bought my Ferret from the club of which my brother was a member. This way I knew the vehicle had been well-maintained and a record kept of the service history since the previous owner acquired it. Prior to that a very experienced ex-REME mechanic, working from the dedicated EMERs, had completely stripped and rebuilt the Ferret.

10. **Check it like any other second-hand vehicle sale**

    If you do not know the provenance, check the engine state and listen to it running. Starting from cold there may be a variety of unusual noises so, if you can, take someone experienced with Ferrets along with you. The exhaust expansion joints can be noisy until the engine is warmed up, and a blown exhaust gasket can sound like worn tappets.

    - Consider replacing the plugs, points and oil filter. The oil-bath air filter is in the fighting compartment and seldom used – only if you plan going across dessert (Op Granby Mk 2!)

    - Is the brass fuel cap in place? There are tales of Toms cashing these in for scrap value.

    - Ask about whether the fuel tank has been lined (leaded fuels used to create a protective barrier – unleaded ones don't and tanks can hold all sorts of rust and muck).

    - Check the state of the tyres and how well the brakes hold on the hydraulic brake pedal and the manual parking brake cable. Both actuate on the brake cylinders and shoes of each wheel.

    - Check the radiator and state of the cooling system.

    - Check the brake pipe linings; check the Tracta joint gaiters are not torn or perished; check if the lubricating nipples have been greased and particularly any fore-aft movement on each wheel, which will indicate a loose wheel from the effects of wind-up.

    - Insist on jacking up each wheel in turn with the other(s) chocked with the forward/reverse transfer box in neutral and the handbrake off. You should be able to rotate one wheel and the other should turn. There should be about 5˚ of movement before the other wheel starts moving back. If that fails, inspect the driveshafts. (If they are present, you will need to remove the radio tray and some gearbox covers to see the rear driveshafts, and the front driveshaft covers).

    - Now jack up both wheels on each side in turn. With both wheels off the ground, with the parking brake off (critical!) and with the forward/reverse transfer box in neutral (disconnecting the driveline) turn one wheel. The other one on the same side should also turn. If it does not, you have a broken bevel box, broken epicyclic reduction gears in the wheel hub, a broken prop-shaft or a combination of all three.

- If turning the back wheel doesn't cause the driveshafts to move and the front does, you know the break is at the back, and vice versa.

- Once identified at the front or rear of the vehicle, drain any oil, remove the outer hub(s) to check the condition of the sun & planet gears. If they are fine, then its either the bevel-box or tracta joints. Let the oil run out from the suspect bevel box: if the gears are broken, the oil will be poor.

- Oil leaking from the wheel hubs down the inside wall of the tyre is an early indicator of wheels coming loose from the effects of drive-train wind-up.

- In extreme cases, the front prop-shafts or, more likely, the central sun gears in both the epicyclic front reduction hubs, may have been removed for towing or in an attempt to reduce wind-up.

- To help prevent wind-up the tyres should be evenly worn and within 2 inches of the same circumference on each side.

- Remove the seven inspection covers and look for excessive oil leaks. The rearmost engine oil tank drain access plate is usually left off to allow natural drainage of oil and rainwater from inside the hull. (Don’t ever jack up the vehicle on or near the access plate; do so on the armoured hull corner. Otherwise its all too easy to put the jack straight through the bottom of the engine).

- If the gearbox is in a bad state, consider looking elsewhere. They are expensive to replace and hard to find. I suggest that you walk away if either of the access plates are missing, the gears rusted, the casing cracked or linkages broken. A common problem is the lack of adjustment of brake band wear. Any slippage when engaging gear, moving off or driving will suggest problems with gearbox brake bands, loss of the thin oil in the fluid flywheel, or driving technique.

- Batteries can be replaced easily, but check the status of the wiring loom, the indicators, side-lights and headlights. It easy to check the left-hand battery, but the right-hand one is underneath the air filter. Is the isolator switch fitted to the left-hand battery, or has it been fitted elsewhere in the wiring loom? I’ve seen the smoke grenade discharger converted into an isolator switch.

- Check the condition of all the bins, and that their hinges move freely. Have any of the padlock hasps gone missing?

- Check the steering lock and firmness of the steering wheel; also that the hatches can open, stay open, and shut afterwards! This list is not exhaustive: check as much of the vehicle as you can.

- Although the run-flat tyres may look OK, check the tyres pressures and their condition, particularly if you intend to drive your purchase away.

Ferrets need to be driven regularly and kept properly lubricated in order for gaskets and seals not to dry out, and for mechanical components not to seize up. Unless you are very familiar with Ferrets (in which case you probably won’t be reading these notes of mine) if you possibly can, take an ex-REME mechanic experienced with working on Ferrets along with you. I wrote it that way rather than say ‘experienced mechanic’ for the Ferret is a specialist classic vehicle and can be expensive to tow, recover and repair!

Buying a Ferret very much like buying any second-hand car: caveat emptor, buyer beware and all that, but with a 50 - 60 year-old classic vehicle, the checking has to be that much more thorough and careful, particularly if you intend to drive away from the purchase. Nevertheless, if you are lucky or careful enough to get a good vehicle, there’s an enormous amount of enjoyment to be had from it.