

SUMIYAMA

So you want to buy a GTO?

Part One – Introduction

Be aware that not many of these motors that have previously been imported, have much service history with them and those that do is mostly in Japanese. If you are lucky enough to have any history, which should be there on U.K. spec motors, make sure the mileage matches the paperwork to the speedometer. Don't be fobbed off with lies, an importer quite close to myself assured me that the S.V.A. takes into account all the service history. This is just a case of an overt thief trying to con people.

Check the V5 [vehicle log book], make sure any relevant numbers match with the V.I.N [vehicle identification number] plate, this should be at the rear of the engine bay in the centre and visible, make sure the numbers haven't been tampered with or the plate looks as if it has been replaced there is also a chassis number stamped into the bulkhead nearby, a motor may have a few engines in its' lifetime but it will only ever have one chassis number. The engine number is located on the front of the block, gearbox end, with an engine type number very close to it. Mitsubishi for some strange reason, do not recognize engine numbers on their computer system only chassis numbers.

Ask for any M.O.T. documentation, if buying from a worthy dealer you will probably get the full 12 months, insist on this anyway, if buying private either insist on a full ticket to be included in the deal or use this as a bargaining point to drop the price, this mainly depends on your own personal knowledge of the motoring world. Again all paperwork should match with serial numbers etc.

As the last paperwork check and before you hand over any of your hard earned cash, have it H.P.I. checked, especially if buying private, dealers will normally have this done before they took the car in the first place, but even then it may be worth having it done to satisfy your own mind. This will only reveal any plate transfers, outstanding finance or write off declarations whilst the vehicle has been registered in the U.K. This does NOT take into account its' life abroad.

Use this link, as well as H.P.I it also has some excellent advice on purchasing from both the trade and private sellers:
<http://www.newhpi.co.uk>

If buying from trade, insist on a warranty, the longer the better, this may even cost but it is well worth the extra pennies for peace of mind. If buying private there are companies that offer warranties on private buy motors. Before parting with any cash for a warranty read through the policy to clarify all the get out clauses they incorporate. Make sure that all major mechanical components are covered, the engine and transmission is not cheap to replace even at second hand prices put labour on top and you end up with quite a hefty bill. Do be aware though that most of the warranties are extremely difficult to claim on as they don't want to pay out as quickly as they took the cash in the first place. Most warranty companies will only allow work to be carried out by a company that is VAT registered. If you do need to make a claim on a warranty please do check with the warranty company first for authorization of work by any specific company.

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As with any warranty, please read the whole agreement thoroughly to be sure that it is what you are being told it is !

Have an initial look around the body, just a quick check with the eyes to see that every thing is or appears to be in place, we'll come back to the body a bit later. Obviously if something is not right in alignment of panels etc forget it and move onto another beast.

It is extremely rare for a GTO to suffer from any rust, if any is present then there may be a reason for this, badly repaired accident damage or something similar.

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Part Two – The Engine

From my own personal experience I would insist on the engine being cold before you view the motor, a warm engine can mask quite a few faults; this of course applies to any vehicle and is not just GTO specific.

Open the bonnet, the lever is at the bottom right hand side of the driver's side dash. Check the bonnet opens smoothly and both rams operate correctly, the bonnet stays open.

Check all the fluid and oil levels, if you don't know what's what, ask the owner, much may be revealed here, he may well have it serviced but I'm sure that the majority of GTO owners know every check under the bonnet. Check the oil level, make sure there's enough in there, excessively low oil levels in these motors definitely spells neglect, and also check the colour of the oil.

It is recommended that oil changes occur every 4500 miles on turbo models and 7500 on non turbo versions.

Have a good look at the brake fluid level and colour, it should be o condensation in the massive exhaust system as long as this disappears it's o.k. What you're really looking for is dark or blue smoke indicating burnt oil, probably from either

worn engine internals, i.e. piston rings, valve guides or the turbos, if any of this is present you should really walk away, this obviously depends on how much you can haggle the point and your own understanding of engine repair etc.

If everything is o.k. it will be a white grey colour which will disappear as soon as the engine warms up. If starting from cold the emissions will probably only be evident from one side of the tail pipes, normally the left hand side. This is due to the system having one straight through pipe that splits into two rear silencers, the emissions will follow the easiest way out until revs are increased and the pressure will bring both sides into use. Of course this last part is irrelevant if the system has been upgraded and only has one exit pipe.

Return to the engine bay, the hydraulic cam followers[tappets] have a tendency to be a bit noisy especially on initial start up, not all GTOs suffer from this but some do. As long as the oil level is correct the noise should reduce soon, in most cases it will go away altogether but may return intermittently, as long as it doesn't sound like a bag of nails with no improvement at all it should be o.k. There's plenty of info on this subject in other areas of the board. The earlier cam followers had a 1mm in the top, this was later enlarged and the latest spec cam followers have a 3mm hole which should cure this fault. These followers are easily interchangeable and the heads do not have to be removed to do so.

Listen to the turbos, there's not much you can do here but they should not be noisy or rumbling, no high pitched metallic noises, though if they were that bad they would probably have packed in by now or disintegrated internally. The main problem with turbos is, as mentioned earlier, they can smoke a bit, this is because the internal oil seal solidifies and allows oil into the system, and this will exit from the exhaust as smoke. Turbos can be overhauled from about £200 each and upwards depending on the damage to them. <http://www.turbotechnics.com/index.htm>

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There is a Y pipe, normally dark grey plastic that attaches to the throttle body housing, this has two inlet ports which are attached to rubber intercooler hoses by jubilee clips, and this can tell you lots about the engine. Disconnect each of the two hoses and look/feel inside them, if there is oil present this is a fairly good indicator of wear/worn seals within the turbos. Looking from the front of the engine bay, the left hand pipe runs from the intercooler that supplies the front turbo and the right hand pipe runs from the rear turbo intercooler, this will tell you which, if any or either turbo is worn.

The Y pipes are sometimes updated with an aftermarket version in stainless steel and the hoses are sometimes replaced with a coloured version.

Listen for any squeals from the cam belt area, possibly indicating a worn bearing in either: an idler wheel, alternator, power steering pump or even a worn cam belt. These can all be rectified at a price, a cam belt change will cost you about £200 ish but do allow for every component to be changed in the cam-belt system, and this price only includes the renewal and fitting of the cam belt itself.

The whole recommended job includes the water pump, the cam-belt tensioner, cam-belt idler pulley and the cam-belt tensioner pulley. These components along with a cam-belt will cost anything between £250 to £300 or more and of course there is labour on top of that. It is also advisable to have a new thermostat fitted at the same time. The alternator/air con belt idler wheel costs approx £70 and these tend to give a high pitched squeal when worn, it takes anywhere between 30 minutes to one hour to change one of these.

An engine compression check would reveal more but as the front bank of pistons only is accessible this may be difficult, to access the rear bank involves removing the fuel plenum chamber, about an hours work and the owner probably wouldn't appreciate you trying to take his engine to bits, though it would be amusing though to see his/her expression when you ask.

For information purposes the compressions pressures should be as follows:

Non Turbo: 185psi minimum of 139psi

Twin Turbo: 156psi minimum of 115psi

Maximum variation of not more than 14psi. in cylinders.

Also as with any motor, listen for any out of place noises that could indicate wear or damage in the engine.

In the centre of the dash console are three gauges, the left hand one is oil pressure, check this one and keep an eye on it during the test drive, on tick over it will be around the $\frac{1}{4}$ mark, whilst driving it should be around the half way mark, certainly not lower with the engine under load.

Whilst on this subject the centre gauge contains the turbo boost gauge, though not an exact reading of what's going on, it's a bit naff really, but it could give you an insight into what's happening with the turbos. If this rises from just above zero to max in a split second be aware, it could be just a sticky wastegate but it could be worse depending on what

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modifications if any have been fitted, or there could be a simple explanation such as a split hose or one that has been dislodged.

The other gauge beside this is the Temperature level. With the engine at normal operating temperature [1/2 way] increase the revs a bit at a time and listen for any unwanted or strange noises from the engine. This may also be a good time to listen for any exhaust leaks, but they should be prominent at idle.

Make sure that you check as much of the exhaust system as you physically can, check for repairs or corrosion and leaks, leaking exhaust gases will show up as black sooty stains. If you have to get down on hands and knees to do this, do it, exhaust systems for these motors do not come cheap. In fact I can't really think of anything that does.

For the non turbo models the same checks apply except of course for anything concerned with the Turbo-charging system.

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Part Three – The Bodywork

As long as you're satisfied with the engine at this stage move onto the bodywork (see: Part Two - The Engine).

This time have a thorough inspection of all body panels, corrosion is not a major problem with GTOs so any rust may be as a result from an accident or just something innocent but check it out thoroughly.

There may be a small dent here and there but these can mostly be rectified fairly cheaply as long as the paintwork has not been broken.

The paint on the plastic panels may be a bit faded unless it has been regularly polished, especially the wing mirrors and the rear spoiler, colour magic is excellent for keeping this in check. Red is terrible for fade, I know, mine is red.

Make sure the doors open and close properly and shut true to the body. Check the door doesn't drop when you open it. Make sure the bonnet aligns correctly and does not foul the wing panels and has an equal gap running down both sides.

Do a similar check with the tailgate, as with the bonnet make sure both support stays operate smoothly and it opens and shuts smoothly with equal gaps at both sides.

Inside the car, operate the lighting switch and if it is fitted with " pop-ups", make sure that they both operate properly in rising and retracting, also see if they are fouling on the paintwork or the side lights [Jap-spec]. Make sure they also work on "flash".

At this point do a normal all round lighting check including horn and wipers and any auxiliary lighting, make sure that there is a rear fog light fitted and that it works. On some models there are also lights for the mirrors on the sun visors, lower them and check that they work. A task as simple as changing a bulb is not always that straight forward especially if your mechanical knowledge is limited or your tool box is a bit sparse.

Whilst checking the outside have a good look at the brake discs, they should be evenly worn and smooth, not pitted or scored with grooves, also depending on which wheels are fitted have a look at the pads. The rear disc covers are terrible for masking wear on the rear disc inner faces, these are often corroded beyond use and are obviously then dangerous. The rear discs house the handbrake system, due to the extra machining involved in the manufacture of these discs they are normally more expensive than the front discs and obviously more time consuming to fit.

Have a good check of the wheels and their rims for damage, standard wheels can be replaced but if it has an after market set it may be very difficult to get the odd replacement. Scratches and marks in the rims can be polished out at a cost. Tyres are expensive at these sizes make sure there's plenty of tread, have a good look at the inner edges as wear here may not be visible due to their width. Any tyre wear can be a result of either: poor tracking, worn suspension components or bad suspension geometry, incorrectly inflated tyres or just age/mileage.

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On the later models, Mk11 and Mk111 there were significant changes all round. The pop-up headlights were replaced with enclosed headlights, the earlier ones have a tendency to condensate, and this was rectified later on. The body lines remained just as smooth but were changed cosmetically.

The main improvements were installing a six speed and stronger transmission and a slightly more powerful and better designed engine with larger turbos'. The engines were fitted with what is known as the four bolt mains. This is indication that the crankshaft has two securing bolts either side of each main bearing; earlier models had only one bolt either side. However, some later Mk 1 models were fitted with the four bolt main bottom end.

A fairly good guide to which engine is installed is whether there are wires coming from the cam belt cover front face, there should be two multi block connectors, this would indicate the stronger four bolt main engine. However, there are no problems associated with the earlier two bolt main version and this shouldn't be a point for concern or bargaining, I have mentioned this more for general info.

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Part Four – Active Aeros

If the vehicle has these there will be a switch in the centre console just forward of the gear stick.

Turn the ignition to stage one [one click] and press the Aero button, the rear spoiler will flip up, get out of the car and look under the front panel, the front spoiler should have dropped, and dropped evenly, this may be distinguished by an Active Aero sticker or what's left of it in the centre.

The front aero is not always easily visible and you may have to bend down to see it. Turn the Aeros off and make sure they retract.

When in the 'auto' mode the aeros will activate at 50 M.P.H. and retract at 30 M.P.H.

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Part Five – Inside the Car

There is a choice of leather or cloth trims, and to be honest neither have outstanding wear qualities, Jap cows must get extremely cold in the winter.

If it has leather and it's a bit tatty it will cost up to about a grand to replace it, unless you can either D.I.Y or have contacts in that business, even then it will not be cheap. Full members of GTOUK can get an excellent deal on this, see our 'Links' section for details.

The drivers seat is the electric all singing all dancing version with side and lumbar adjustment, but the passenger is not supposed to be all that comfortable. Oh well that's life! At least it makes them stay awake on those long and boring motorway journeys to supply you with endless amounts of refreshments, sweets, fags etc. and the odd, "Are we really going that quick?"

Apart from the dials already mentioned earlier the rest are self explanatory, on the web site (see 'Tips & Guides' section) there is a diagram of the dash set up so we won't go into that here.

The one light I will mention is the "Check Engine" light. This is at the bottom left hand side of the instrument cluster, with the ignition turned on all the lights will illuminate, apart from the ignition and handbrake lights these should all cancel after a few seconds.

Obviously the ignition will cancel on start up and h/brake when released. Check the central heating [air conditioning/climate control] works through all ranges and the screen illuminates on the in dash unit. In the front left windscreen corner air vent there should be a small circular disc, this is a sensor for your climate control system which works with the air con, this also works in unison with a sensor which is in the centre of the headlining panel. These vents do not seem to be very durable and on most, older motors they have cracked or distorted a bit, that's fairly common and nothing to worry about. Replacing them will cost about £25 per side plus fitting time.

Check that both windows operate smoothly and also the passenger side can be operated from the passenger side switch, make sure that there are no clunks in the operation of the window, the pulley that the winder operates on can break and they are expensive to replace. If electric retracting mirrors are fitted make sure they work, the switch is forward of the gear stick, between the "active aero" switch and the mirror adjustment control, check the operation of this also. These were not fitted to some early models and also only an optional extra on U.K. spec models.

The carpet is quite good quality and tends to wear well. The individual carpets though seem to be varied; the originals have either been lost or worn out in most cases. There are companies who can make these with varying options.

Whilst seated check the handbrake free-play, these are easy enough to do quick adjustment on but if the handbrake is worn it means a rear brake strip down to replace the shoes. They are housed within the rear discs. To adjust the

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handbrake properly it must be adjusted at the brake shoes which are within the rear discs, tightening of the cable only will just stretch the cable.

On the dash there will be an E.C.S. [electronic controlled suspension] button. This has two mode settings Sports or Tour, it will change accordingly when the button is pressed, it will also illuminate in green in the dash panel. When working there will be a distinct difference in the ride between the two settings, the Sport mode will be firmer, it also incorporates an anti dive system and anti squat.

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Part Six – Suspension & Steering

If the light flashes between the two settings [sport/tour] it may be a broken sensor wire, these are on top of the struts under black plastic three bolt hoods and are simple to repair.

Other faults here may be within the E.C.S. system or it's motor or a worn shock absorber. The E.C.S. shocks are only available from Mitsubishi and again are expensive, fronts are in the region of £300 each and rears are about £200 each.

If the light on the dash doesn't work it may be just a blown bulb but it is more than likely to be due to a fault. What happens is that when a fault occurs the lights will flash between sport / tour and some unscrupulous sellers remove the bulbs so that a buyer is not aware of a fault.

The other possibility is that the suspension has been replaced with an upgraded or after market set up. There are variations for this but none of them include the E.C.S. option. H.K.S. now manufacture an after market adjustable electronic suspension set up.

Something else worth checking is the steering racks, both of them front and rear, if they are leaking they will need overhauling; this costs about £200 ish per rack plus labour for removal/refitting. Make sure that there are no signs of power steering fluid around the steering rack gaitors or that they are not ballooning due to being full of p/s fluid. There should not be any fluid inside the boots at all. The steering system runs at pressures in excess of 1000 p.s.i. when engaged, this is obviously a hell of a lot of pressure and you really need the steering to stay intact.

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Part Seven – Transmission

Auto Gearbox Transmission

This section was written by Marty [Roadkill] Kitching so many thanks must go to him for his invaluable knowledge of the auto version.

So you've decided you want the Auto-gearbox?

This is a matter of personal preference. This guide is not an attempt to encourage/discourage Auto Gearbox ownership - it's just to try and make sure you buy a good one [also read 'Manual Transmission' for output shafts M.S.].

The fluid level is checked with the gearbox hot (take it for a run). Ensure the car is on a level surface.

With the engine running put the gearlever through all the gears (Including reverse). Don't forget to put your foot on the brake!

Check using the dipstick (gearbox in neutral). The level should be at the top on the HOT mark.

It should be a nice golden colour - Anything darker indicates neglect-walk away. [There is an alternative for this, where red oil is used [Dexron 11] but it should not be discoloured. M.S.]

History - The service history should reflect gearbox fluid changes every two years-be aware that you can only change half the fluid at a time so skipped intervals are not good.

Gear Selection - The car should go into each gear selected smoothly and not "clunk" Poor gear selection is a sure sign that the gearbox will need attention soon. Don't forget to check Low (L) and 2nd (2)

Kick down - The transmission computer will kick down the gearbox upon varying applications of throttle. Make sure it works. Also the Pwr/Hold button should alter when the kick down occurs - It will kick down with less throttle in Pwr than Hold.

Overdrive - The switch on the selection lever is for switching the Overdrive On/Off.

Flush is O/D on. Proud is O/D off. When switched off the car will not go into top gear but will hold in 3rd. Also if you are driving along above approx 40mph and switch the O/D off the gearbox will change into a lower gear than with it on. Make sure it works as described.

Points of Note

- All the GTOs from Japan are 4WD including the Auto's. (American Spec Auto's are 2WD)
- You cannot buy a UK Spec car with Auto - They never made any.
- There are no Twin Turbo Auto's. If you find one it can only be a converted N/A. This is not good, as the gearbox cannot handle the power.

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- Some people fit extra oil coolers to the gearbox. Good idea. This will help preserve the life of the box, as heat is the killer of Auto boxes.

Martyn Kitching

GTO UK Owners Club

Manual Transmission

As mentioned earlier the manual versions were fitted with either a five or six speed transmission, depending on year of manufacture though there are a few early Mk1s with the six speed fitted, this was not a factory option but more of a mod made by owners after the failure of the five speed box.

Both versions of the manual transmission are strong enough to cope with everyday life. They do have an Achilles heel in the output shafts, I have mentioned these earlier but they can be expensive to replace.

Parts are available, at a cost, \$575 including a seal set from the U.S.A. plus shipping. Fitment can cost anything from £200 ish and upwards, this can be done with the gearbox in situ though the transfer box will have to be removed.

Gear changes should be smooth, however the older GTOs have been around for a while now and some tolerance should be made for a little bit of play, the synchros will wear with high mileage.

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Part Eight – The Road Test

Don't forget that these vehicles are fitted with 4 wheel steer, active from 31 M.P.H. and permanent 4 wheel drive, oversteer is very easy until you get used to the set up! Don't be content with a five minute blast down the bypass; tell the owner that you would like to go for a decent drive incorporating different road layouts. This way you will get a better impression of how the whole unit is working, I'm not encouraging you to break any speed limits so that part of the test is up to you and the owner. You can check the handling and how it sits on the road, check the brakes and that they pull up firmly and evenly. Brake judder may be as simple as a bit of wheel balancing required, but it could also be down to worn or damaged brake or suspension components.

Keep an eye on the following, oil pressure, engine temperature and the boost gauge. DO NOT observe the fuel gauge as this may deter you from ever buying a GTO.

In the rear view mirror you will be able to see the rear aero and when it's working, if there is a fault with this system an "aero" light will illuminate in the bottom right hand side of the instrument panel. As with testing any motor check the clutch action, the difference here is a few hundred pounds more for the replacement! Drive off slowly whilst listening for any rattles or vibrations from the engine and gear box area. The transmission on the five speed earlier models is not as strong as the later six speed versions so check it out thoroughly and make sure that all gear changes up and down the box are smooth in action, not notchy.

With a bit of heavy right foot acceleration should be responsive and rather rapid, if there is any lack of response here it may be down to one of several reasons but turbo problems may be the cause. If you are careful with standing starts the life of the gearbox will be lengthened, when the car has momentum then cane it if you have to, but constant booting it from zero will eventually wreck the output splines on the transmission. On completion of a test drive and for future ownership, allow the engine to idle for a couple of minutes, this is to allow the turbos' to come back to nominal engine pressure. They run at extremely high speeds and if the engine is cut straight away it will stop oil flow to their bearings and lessen their life span. The way around this problem is to fit a turbo timer.

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Part Nine – Points of Advice

The previous sections in this document are a brief run down of what major points can be checked without the facility or luxury of a workshop. Most car dealers will have access to a ramp somewhere, if you can get it on one, do so, that way a check underneath can be made.

Make sure that when viewing the car it is done in full daylight.

Finally, depending on your mechanical knowledge and confidence I would advise having the vehicle inspected by a qualified non bias motor engineer, A.A./ R.A.C or similar. Doing this will eliminate the chance of any dodgy M.O.T certificates and will also give you better peace of mind.

The information in this series is obviously for the GTO but although the engineer checking it over may be very good at his job the chances of him knowing all about them are slim, but he will be more than capable of providing you with a qualified report on the mechanical matters. Bear in mind that this will probably cost so make it the last thing you do when you are certain of which car you intend to buy and before any money is handed over or paper work is signed.

I have not dwelled on the safety aspects such as chassis and under vehicle components as these should be covered on the M.O.T and by an independent check.

Do use the web sites listed for advice and information, together with what's here on the GTO you should at least be fairly well armed with info to help prevent you making a disastrous choice.

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Part Ten – Modifications

Here's a short list of a few of the more common mods' that you may find on a potential purchase:

- Naturally the non-standard exhaust system, possibly with upgraded downpipes. Owners choose this route as not just an upgrade but it quite often works out cheaper than replacing with the Mitsubishi original.
- Wheels, several variations are on the site in picture format.
- Dump valves/ B.O.V.s', the standard fitment dump valve tends to leak and is often replaced with an after market version.
- Air filter upgrades, the most common is either the K&N or the H.K.S. twin mushroom type filter.
- Stereos, the Jap spec radio is very limited in the U.K. and most people upgrade in this area.
- Boost controller, this is probably the best way to more power, when correctly set-up.
- Added gauges in the dash area, the original boost gauge is not that good.
- Suspension, not always obvious, refer to E.C.S. (See: Part Six - Suspension & Steering).

There are others but these are the most common.

For further information on upgrading your GTO, use these links:

<http://www.3si.org/pages/stagedpower.html>

<http://www.3si.org/pages/stagedperformance.html>

Once again I stress that this is not the complete Bible of buying a GTO but I wish that I had that much information at hand when I was looking for a GTO. If you have any questions on any of the above points or other factors, put a post on the board in the relevant forum and it will get answered by either myself or one of the other motley crew that frequent this web site[assuming that we know the answer].

Good luck in your hunt for the perfect GTO. This guide will be updated again when more or relevant information either comes to hand or mind. This "Buyers' Guide" is the property of GTOUK and has been written to help potential future owners of these gorgeous motors. Any further reproduction in two bit Jap car magazines without acknowledgement to its contributors shall not be taken lightly!

Written by

Mark [GTO-MAS]

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