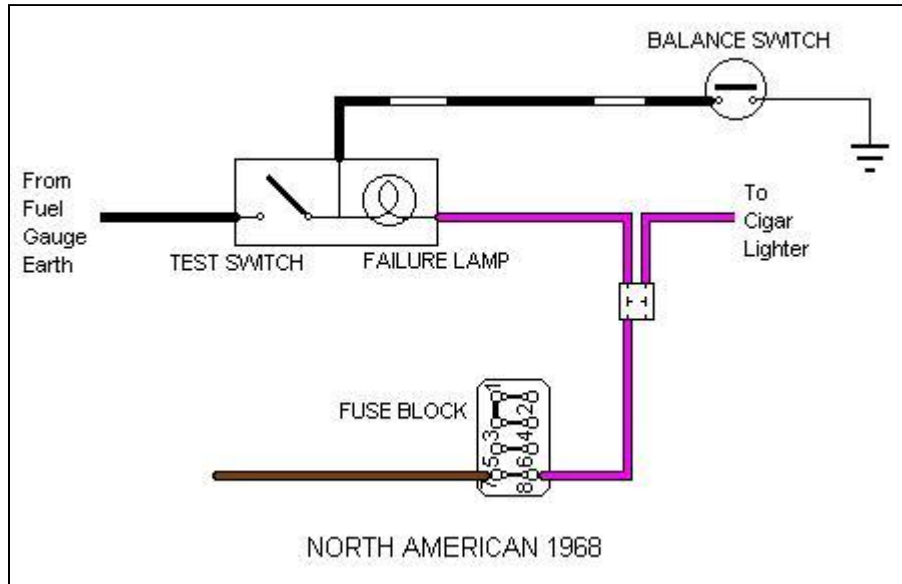


Brake Balance and Handbrake Warning

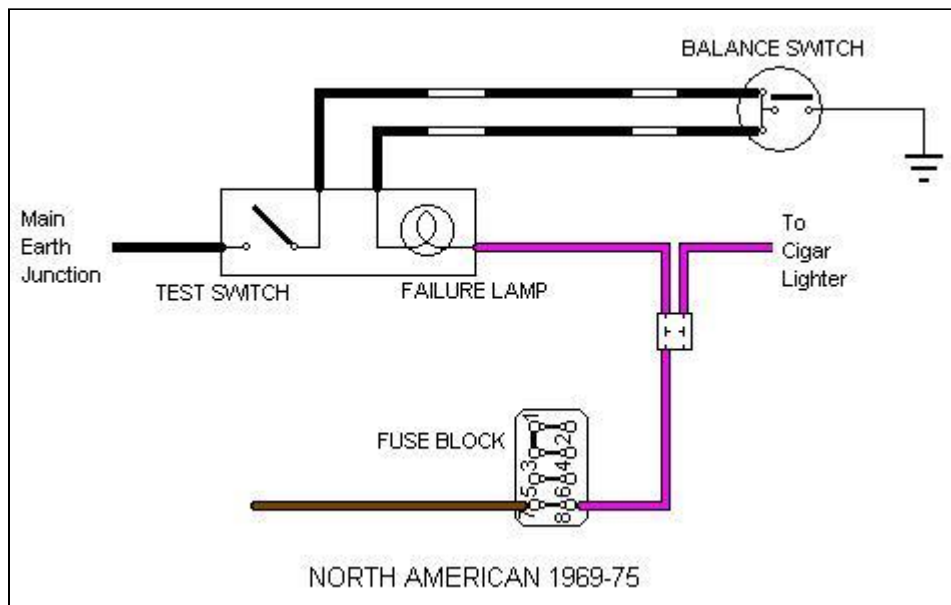
North America 1968

A simple circuit where the manual test switch merely tests the bulb and the 12v supply to it:



North America 1969-75

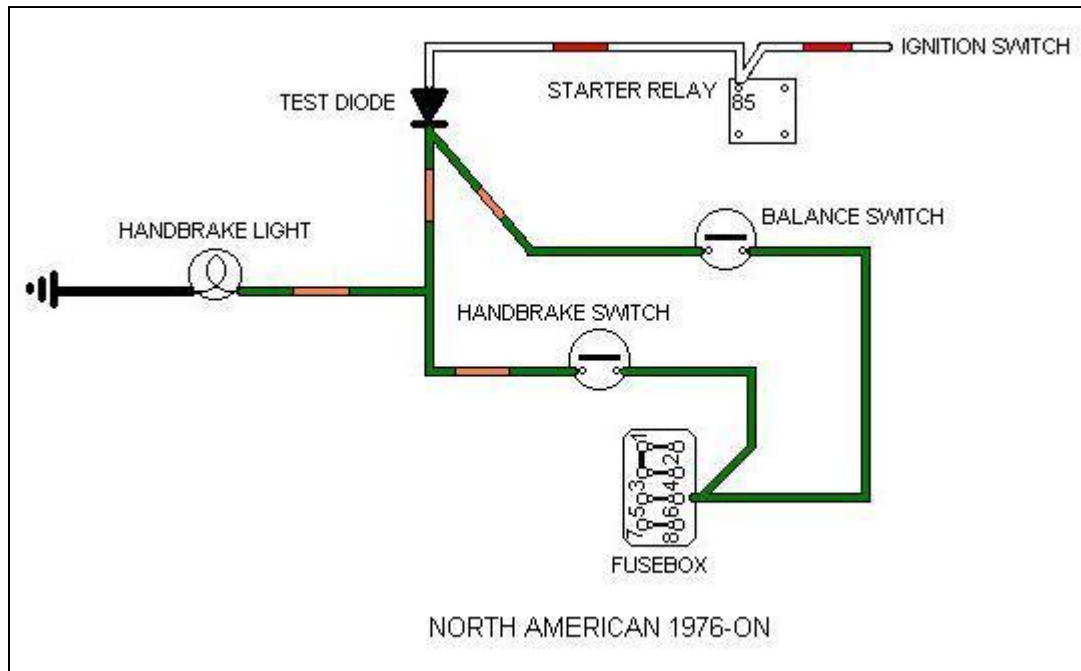
A more comprehensive circuit that tests all the wiring to and from the balance switch and bulb, only the switch itself is untested:



North America 1976-on

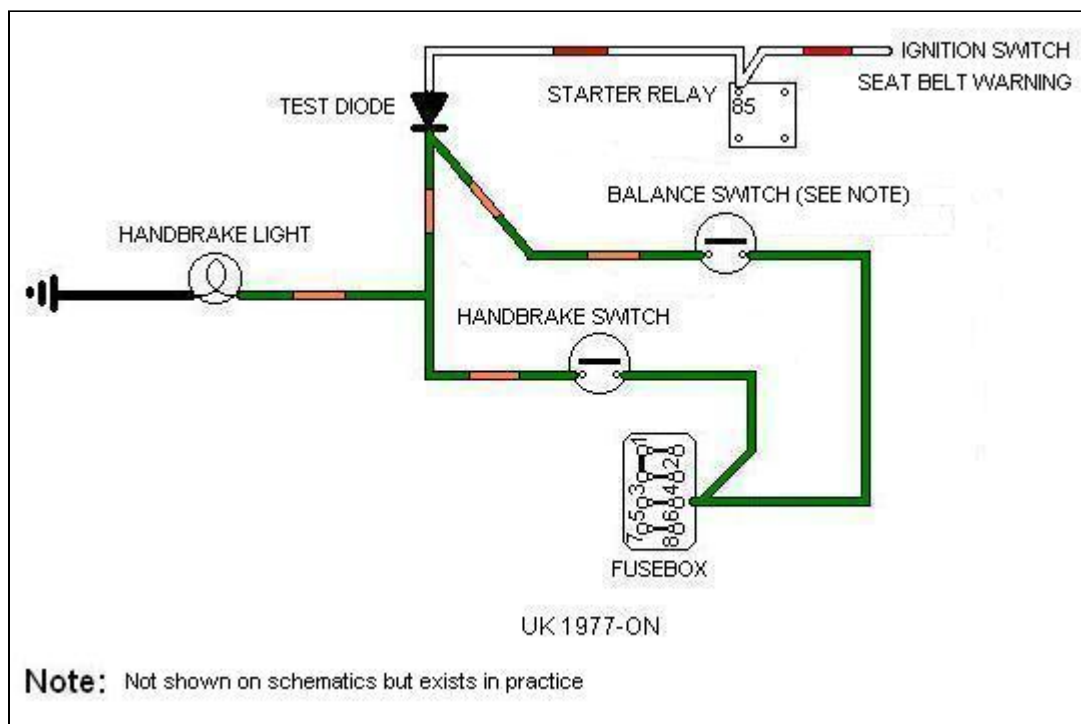
A completely different approach. No manual test switch, the balance switch now only lights the handbrake warning lamp, and only when the ignition is on. The handbrake switch lights the same lamp, and for some reason the (USA) powers that be decided that the lamp should also be illuminated while cranking, even though the handbrake will almost certainly be on anyway! Not unreasonable for automatics perhaps, when one has used Park rather than the handbrake, but not

relevant to MGBs by that time. The wiring to and from the balance switch isn't tested at all, one wonders why they bothered, especially when if the [diode fails short-circuit](#) it causes the starter to crank continuously! (In which case drop the handbrake ...):



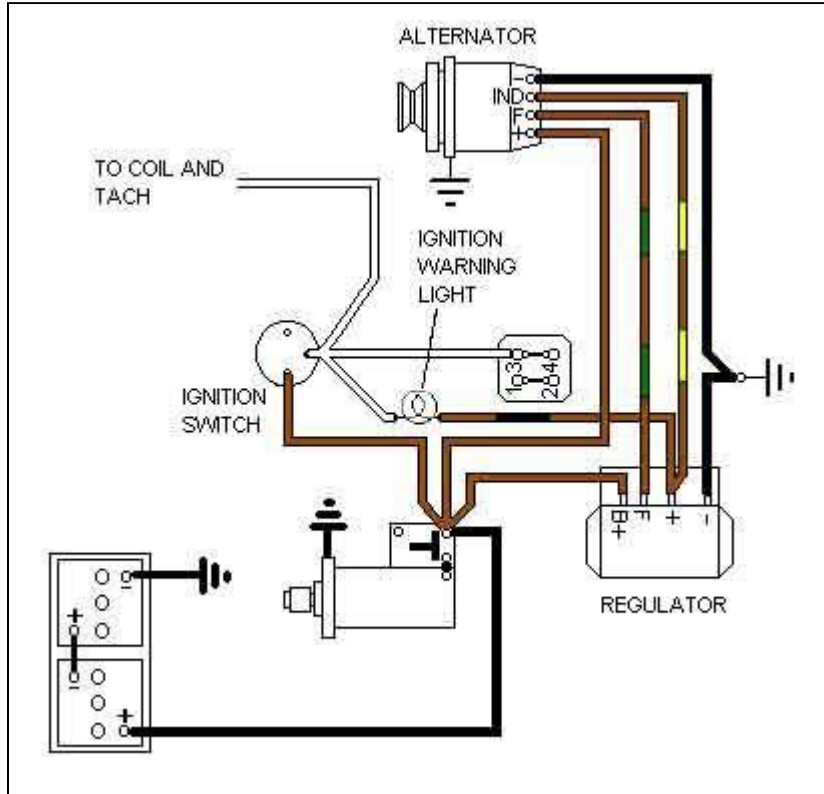
UK 1977-on

According to the schematics all this system does is light the handbrake warning lamp when the handbrake is on or when cranking with it off (even though the handbrake is likely to be on and illuminating it anyway while cranking). No brake imbalance switch is shown, so completely pointless, especially as it has the same problem when the [diode fails short-circuit](#) and causes the starter to crank continuously as above. However the lack of brake balance switch seems to be an omission in the schematics as all the cars checked do have the switch and wiring, making it the same as for North America, so the switch has been included here:

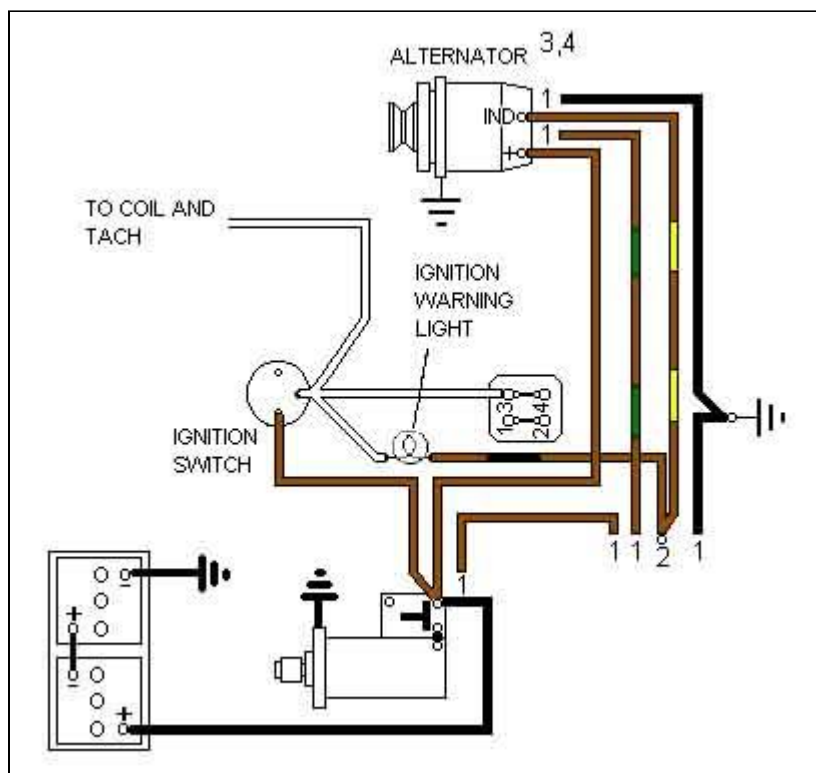


- Provide a new heavy gauge brown from the output terminal of the alternator to the battery cable stud on the solenoid, and from there to your high-current circuits.
- Use the brown/yellow for the IND terminal at the alternator and connect it to the brown/yellow from the warning light to maintain the colour coding.
- Discard the brown/green, taping back and insulating the ends.

Alternator with external regulator (16AC, 1968)



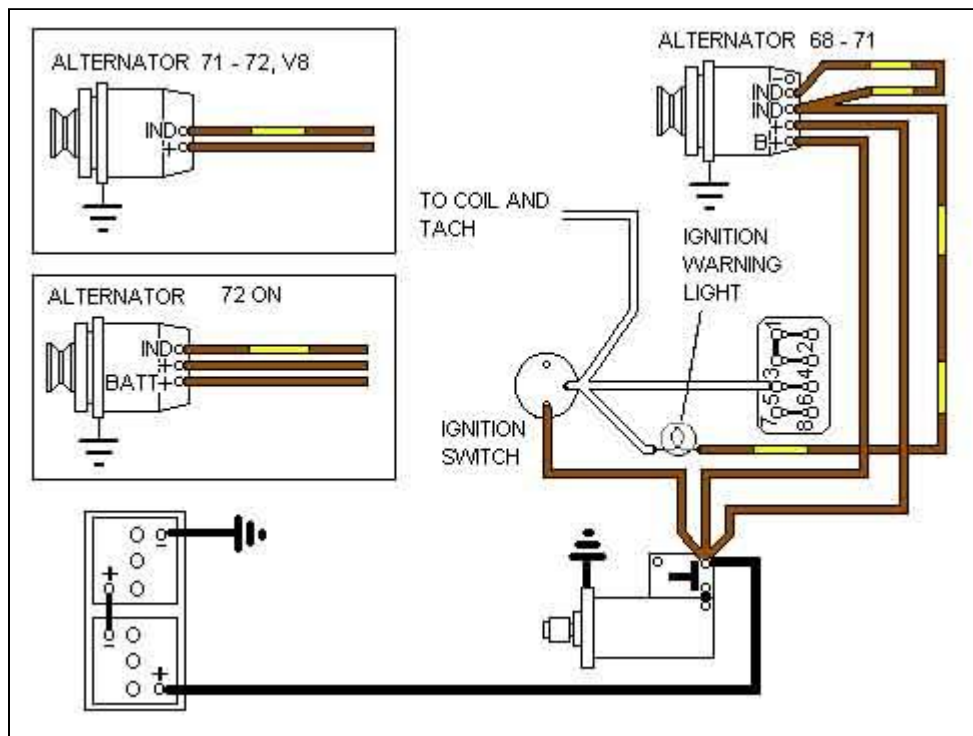
Alternator with external regulator (16AC) converted to Alternator with internal regulator (16/17/18ACR)



Notes:

1. These wires are unused and should be taped back out of the way.
2. The brown/yellow must be connected to the brown/black where the old regulator was on the inner wing, and the resultant connection carefully insulated to prevent it coming into contact with anything else.
3. If the replacement alternator has a B+ terminal, this should be connected to the + output terminal with a short loop of brown wire.
4. If the replacement alternator has a large '-' terminal by the large '+' terminal then the thick black can be connected to it, but make absolutely certain that the + and - terminals cannot come together.

Alternator with internal regulator (16/17/18ACR) Without Ignition Relay (69-76)



Note 1: 2-wire and 3-wire alternators seem to be identical, the only difference being how many brown wires are connected to the plug and hence the alt. Where two brown wires are used, one thick and one thin, the thin wire is a voltage sensing wire. Later models had two thick wires, these are both output wires for a higher current carrying capacity.

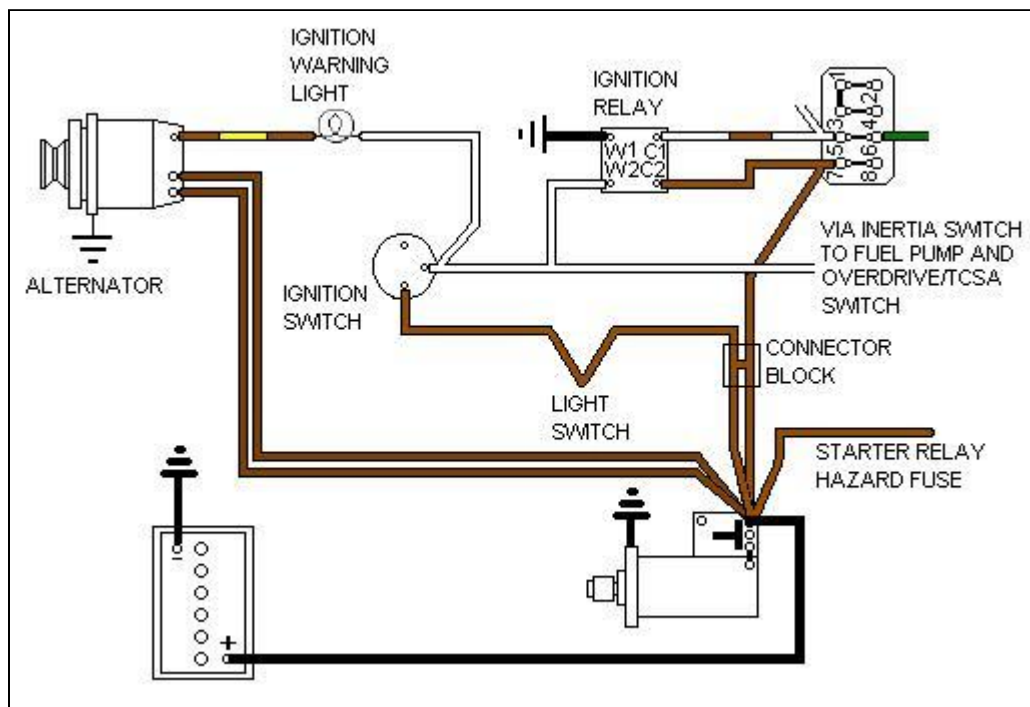
Note 2: V8s used the 1971-72 system i.e. a single thick brown with a Delco alternator. The battery cable terminates at a [toe-board stud on the RHS](#) then a short length of cable from there to the starter, two brown wires go from this stud to the alternator and rest of the cars electrics.

Alternator with internal regulator (16/17/18ACR) UK with Ignition Relay - 1977

Note 1: The Ignition is now fed directly off the ignition switch, and the white for that becomes a white/brown where it is extended to the inline fuse and green circuit for the Indicators, Heater Fan, Tach and HRW i.e. also off the ignition switch. The Cooling Fan remains on the relay via it's own in-line fuse and green circuit, and the rest of the fused ignition circuits remain on the relay and fusebox green circuit. There are now three separately fused green circuits.

Note 2: There are two browns from the alternator to the solenoid, some schematics showing them as two thick output wires i.e. using a '[machine sensing](#)' alternator, and some showing one of them being standard gauge i.e. using a '[battery-sensing](#)' alternator. John Wallace's 78 has one thick and one thin using the BCH battery sensing connector.

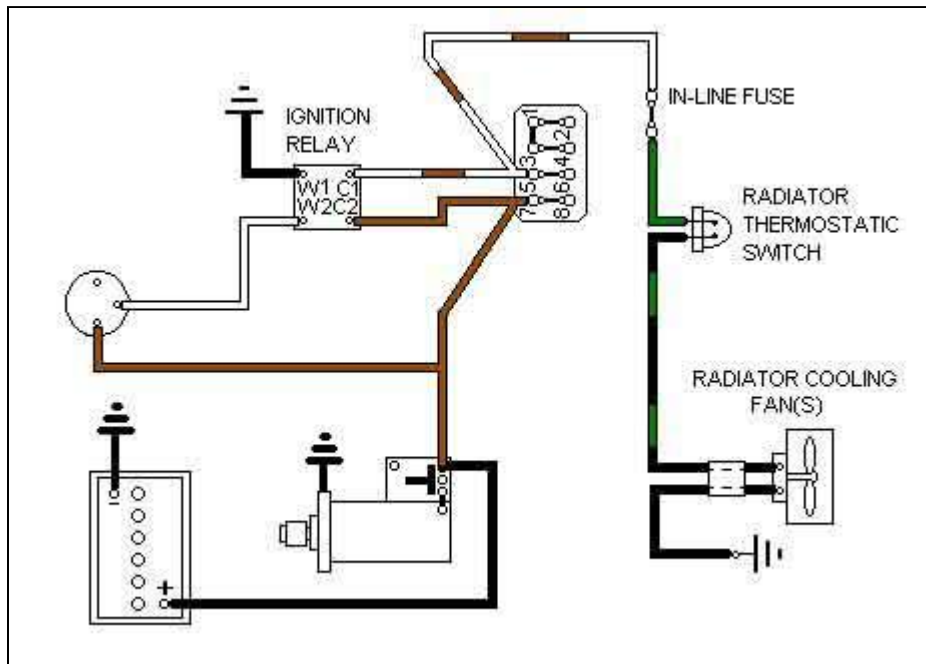
Alternator with internal regulator (16/17/18ACR) North America with Ignition Relay (1977-80)



Note 1: There are two browns from the alternator to the solenoid, some schematics showing them as two thick output wires i.e. using a '[machine sensing](#)' alternator, and some showing one of them being standard gauge i.e. using a '[battery-sensing](#)' alternator.

Electric Cooling Fans

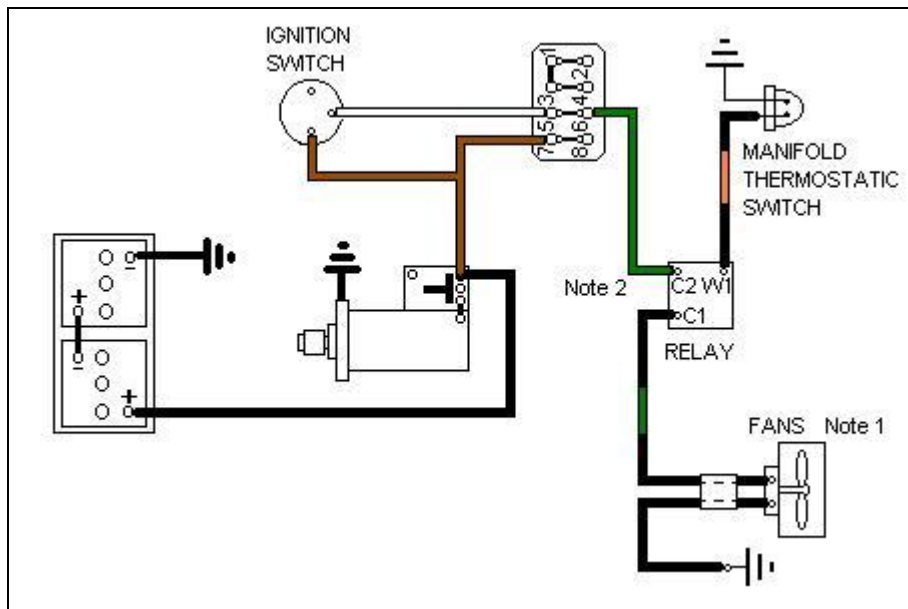
4-cylinder cars



Notes:

1. North American cars had two fans connected in parallel, other markets only have a single fan.
2. All 4-cylinder cars have an in-line fuse under the fusebox in the fan circuit. This fuse is fed from the white/brown (ignition relay, but see below) circuit, then feeds the thermostatic switch with a green wire. Later models from some time in 1978 had a second in-line fuse between a white/brown and a green feeding the indicators, heater fan and GT HRW. Be aware that these green wires are electrically separate from the main green circuit that is fused from the 2nd fuse up in the 4-way fuse block.
3. It's possible that early cars with electric fans may have had a fan relay before they got an ignition relay, and when they got the ignition relay the fan relay was deleted, but I've not seen any diagrams that show this. The Parts Catalogue shows a 3-terminal relay the same as for the V8s, but in order to use this the sensor switch would have to be wired differently, probably the same as for the V8s.
4. Some owners have moved the white/brown wire for the fans from its usual position on the 4-way fuse block to a spare brown spade. This results in the fans continuing to run when the ignition has been turned off, or indeed, starting to run after you have left the car. Nothing earth-shattering in doing so - except that a fault could cause the fans to flatten the battery, or in the worst case start a harness fire.

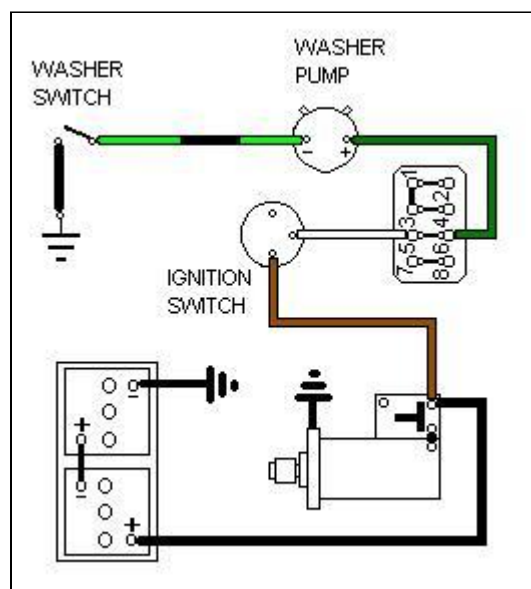
Factory V8



Notes:

1. Factory V8s have two fans wired in parallel.
2. The Workshop Manual Supplement shows the relay been fed by a green wire as shown here i.e. fused. The relay is an unusual 3-terminal design in which the power supply from the fusebox is used to operate the relay in series with the sensor switch to earth, as well as being extended through the contact to power the fans. This puts a heavy load - about 10 amps in my case - on the fusebox and ignition switch, and the heated rear window, also a high current item, does the same thing. Not a good idea with 30 year-old electrics and a significant contributor to slow or non-flashing indicators.
3. Mine came to me with a 4-terminal relay with the power for the fans fed from the brown at the fusebox and unfused, while the relay itself is still powered from the green circuit. I thought that might have been a PO mod but I've since heard of others, so possibly a dealer mod to reduce the load on the main green circuit in the fusebox. The glovebox handbook shows the power coming from the brown circuit and not the green, albeit using the same 3-terminal relay. So whether the colour is an error in one of the drawings, or whether the change to the relay was missed off the handbook drawing, we will never know.

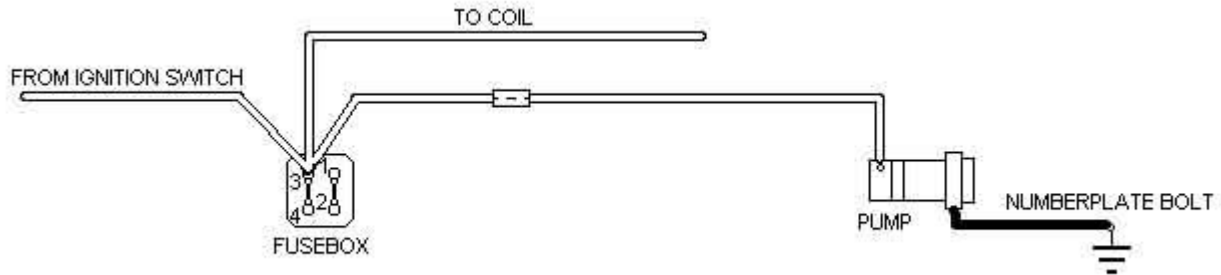
Electric Screen Washer



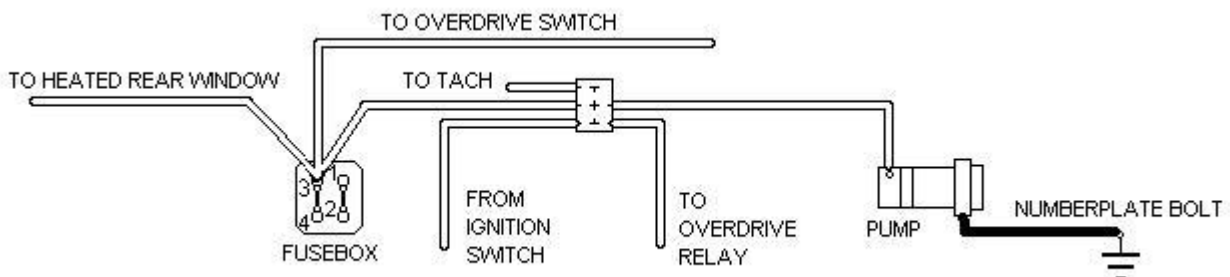
Note: From 1971 for the remainder of chrome bumper production and all V8s the electric washers (and wipers and heater fan) were powered from the accessories position of the ignition switch via a white/green to an in-line fuse under the fusebox, and then via a green/pink. 4-cylinder cars reverted to green (fused ignition) from the main fusebox with rubber bumpers.

Fuel Pump

1962-64



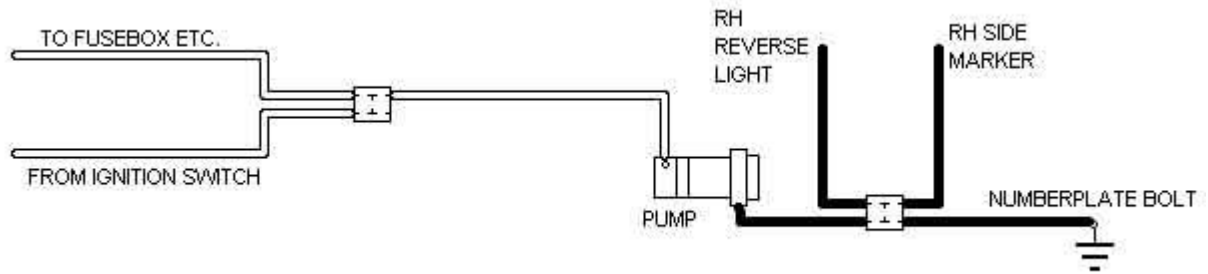
1964-67



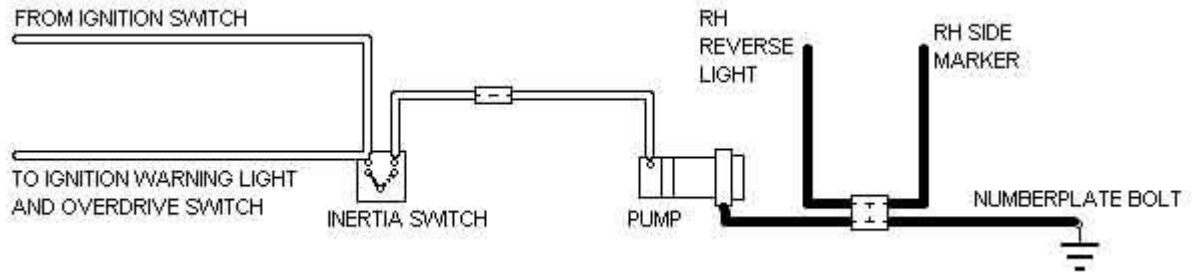
UK 1967-76, North America 1967-69



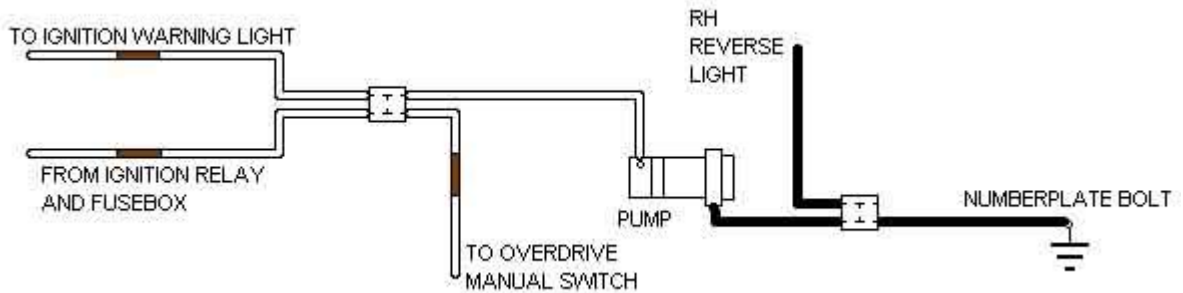
North America 1970-74



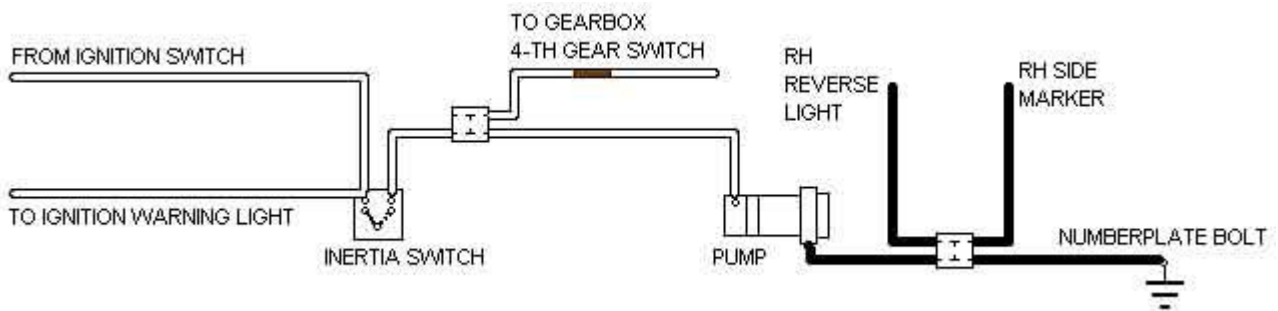
North America 1975-77



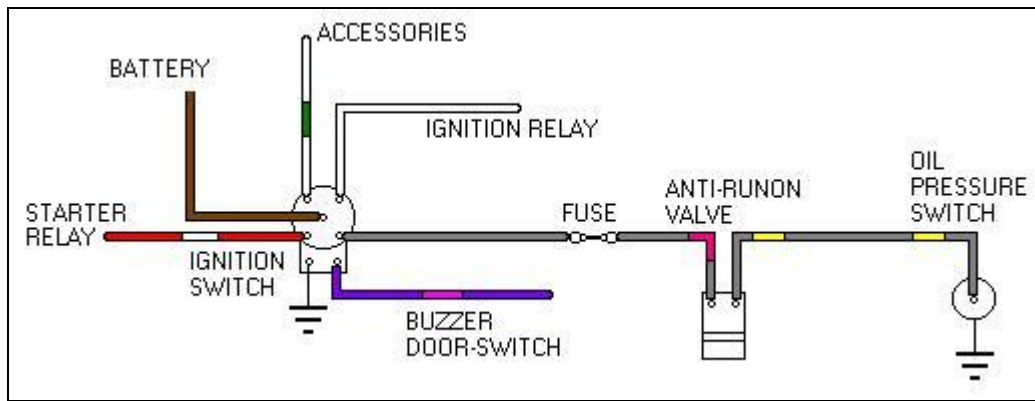
UK 1977-on



North America 1978-on



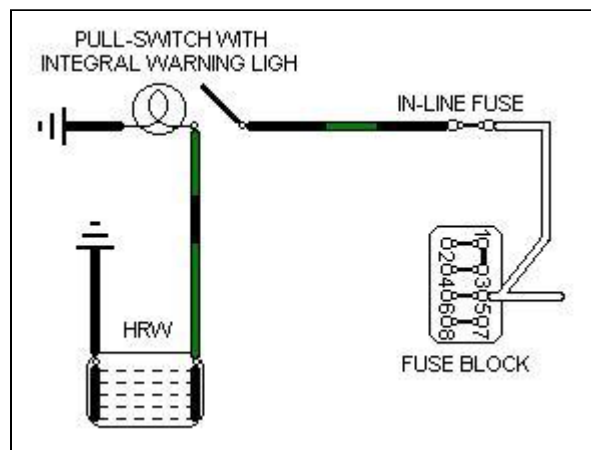
North American Anti-runon Valve - 1973-on



12v is only connected through the fuse to the valve when the ignition is **off**. The oil pressure switch only connects an earth to the other side of the valve when the engine is spinning and generating oil pressure, so with a running engine the valve only operates when the ignition is switched off. When the engine stops and the oil pressure dies away the valve releases again.

Heated Rear Window

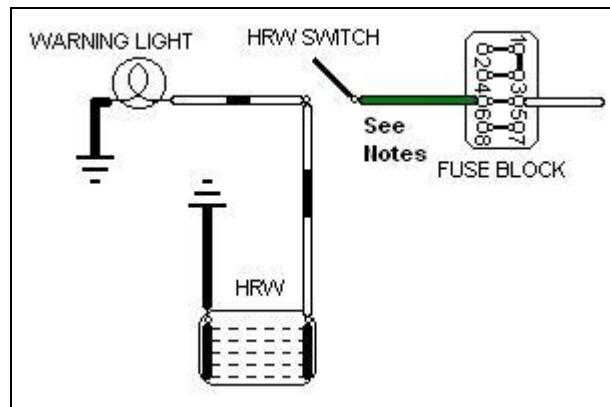
Chrome Bumper to 1970



Notes:

1. North America used a separate switch and warning light, and white/black wires from fuse to switch and switch to screen, from 1968.
2. There was a separate wire from the front to the back of the car for the HRW, and on at least one example this feeds the left-hand side of the screen instead of the right-hand side on later cars. Also being optional the earth wire route and connection could be anywhere.

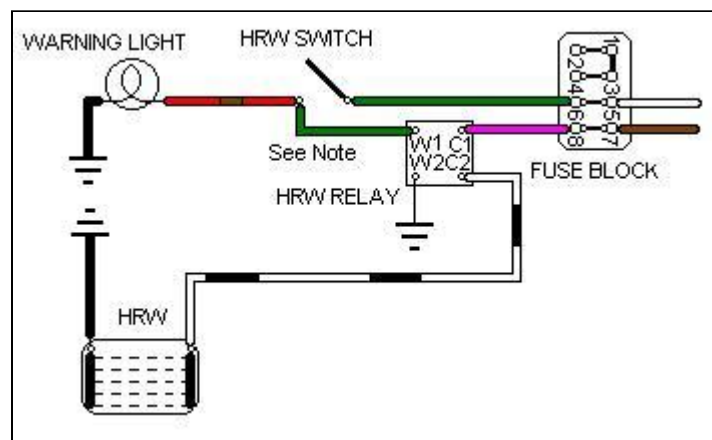
Chrome bumper 1972 model on and all V8s



Notes:

1. Pull-switch with integral warning light used from 1973 in North America.
2. In some diagrams the wire to the external warning light is shown as red with a brown stripe off the same terminal as the white/black to the screen.
3. The 12v circuit from the switch has bullet connections where the main harness joins the rear harness in the engine compartment, [by the right rear light cluster](#) where white/black for the HRW goes up the C-pillar (together with purple for the load space light); and where the white/black connects to the wire coming out of the screen rubber by the right-hand hinge.
4. The earth circuit uses a single black wire down from the bullet connector by the left-hand hinge, to the [top mounting point for the left rear light cluster](#).

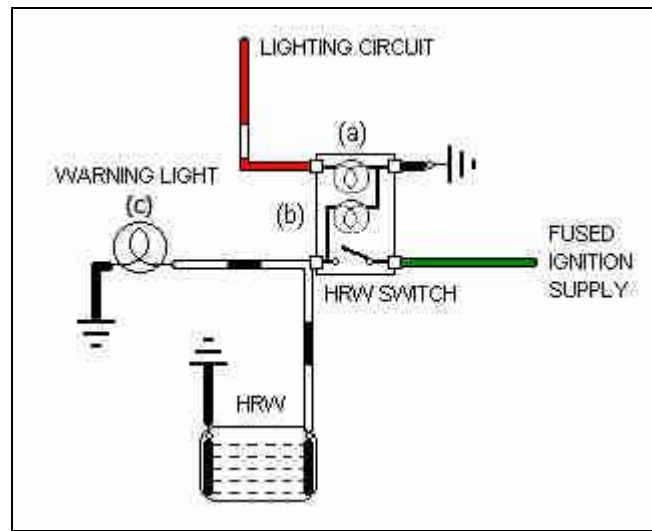
Rubber bumper to 1976 (not V8)



Notes:

1. Green from the output of the switch to the relay is logically incorrect. This colour is normally used for fused ignition i.e. is live all the time with the ignition on which would operate the relay all the time. It also means that two different colours are on the same terminal which normally never happens - the other being red/brown to the warning light. Strictly speaking red/brown should have been used as the colour feeding the relay as well as the warning light.
2. The 12v and earth connections are the same as for the 1971 and later, see [Notes 3 and 4 here](#).

Rubber bumper 1977-on

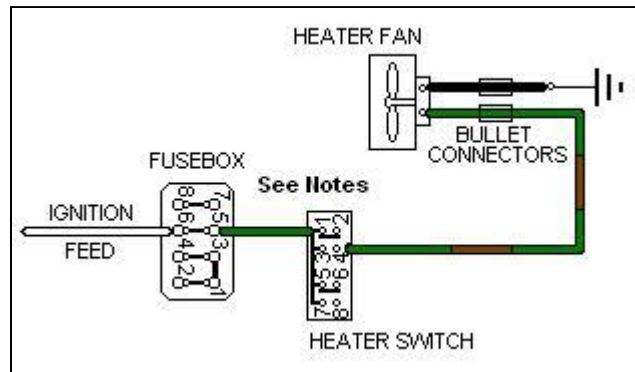


Notes:

1. The switch was illuminated - (a) above - with the parking lights on and hence has additional red/white and earth wires.
2. From some time in 1978 the HRW (GTs in RHD only by this time) was powered from a subdivision of the green circuit fed by a separate in-line fuse under the fusebox instead of the green from the fusebox. One of two connecting a white/brown to a green, it is the one with the thinner wires, the other one with thicker wires is for the cooling fan. See [ignition schematics](#) for more info.
3. Clausager says that 1977 models up to December 77 had the heated rear window switch with built-in warning lamp - (b) above - even though there was space beside the switch for the warning lamp. From December 77 to the start of the 1980 model year there was a separate warning lamp (c), however 77 to 79 (I do not have a 1980) diagrams only show the separate warning lamp. When the fog-guard switch was added in 1980 the space for the HRW warning lamp was lost and a switch with internal tell-tale of unknown part number was provided again. The drawing of the switch above is a bit of a guess as it's not clear from users whether the 1980 switch does have both night-time and tell-tale illumination, as one person says his has the latter but not the former.
4. Clausager also indicates that the HRW relay was only deleted in Dec 77 at chassis number 455131, but that would mean there were both ignition and HRW relays involved from the start of the 1977 model year in Jun 76 at chassis number 410351, which seems unlikely.
5. As well as the 12v and earth connections listed in [Notes 2 and 3 above](#), 1977 and later cars have the white/black output wire going via a bullet connection (left unused on roadsters) and multi-plug behind the dash where the main harness joins the dash harness.

Heater Fan

Single-speed heater fan (before 1977)



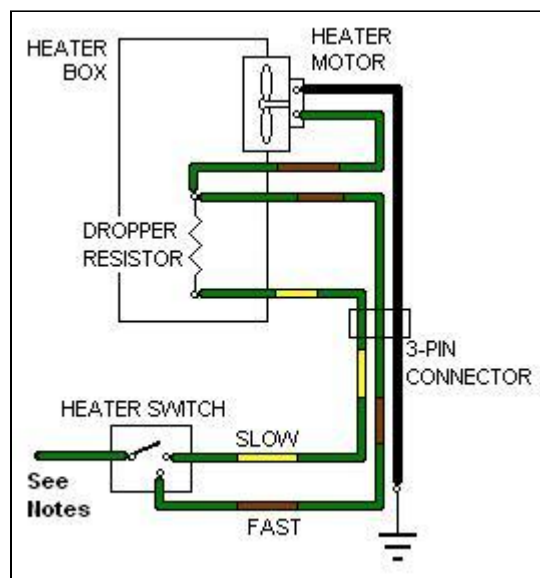
Note 1: Up to 1970 the heater fan was powered from the green circuit in the fusebox. From 1971 for the remainder of chrome bumper production and all V8s the heater fan (and wipers and electric washers) were powered from the accessories position of the ignition switch via a white/green to an in-line fuse under the fusebox, and then via a green/pink to the fan switch. 4-cylinder rubber bumper cars up to the 1977 model year were powered from the green circuit in the fusebox again.

Note 2: Before 1970 the wire from the switch to the motor was Green with a Brown tracer. From 1970 it was Green with a Yellow tracer.

Note 3: Up to October 64 the wires going into the fan motor may both have been black. Because of the 2-way bullet connectors these can be connected either way round and should make no difference. The later fan motor with the differently coloured wires gives a vastly superior performance one way round compared to the other, try both ways.

Note 4: The single-speed fans on my 73 and 75 take about 3 amps.

Two-speed heater fan (1977 on)



Note 1: On 1977 models the heater fan is powered from the [green circuit in the fusebox off the ignition relay](#), but when the ignition relay circuit on RHD cars was modified sometime in 1978 [a second in-line fuse between brown/white and green wires was added under the fusebox](#). The

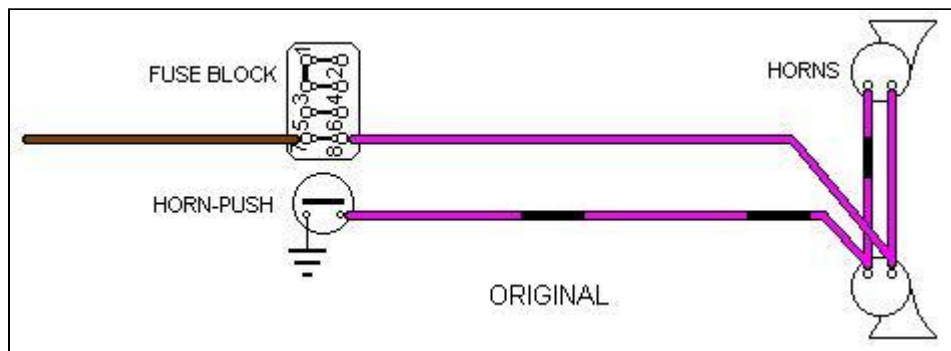
heater fan (together with indicators and GT HRW) was powered from one of these - the one with the thinner wires, the other with thick wires being for the cooling fan.

Note 2: If installing an uprated or aftermarket dual-speed motor that has three terminals to give the two speeds, care must be taken with the switching that power is not applied to both live motor terminals at the same time, or the motor will be damaged. This does not occur with the original two-speed system that used a single-speed motor and additional dropper resistor as shown above.

Horns

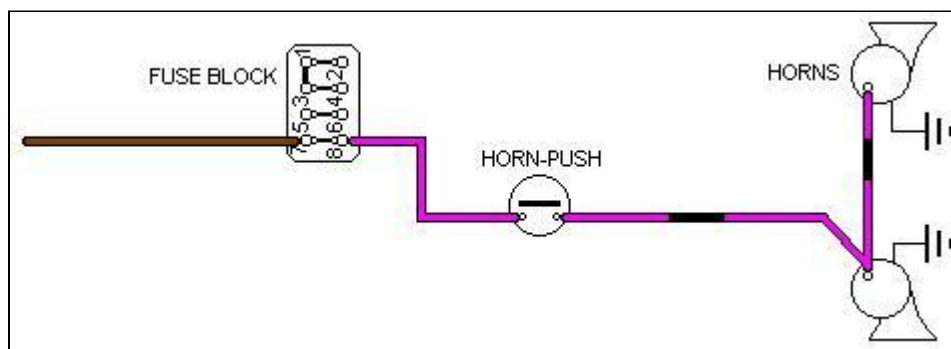
2-wire Horns (pre-79)

The horn push switched an earth to the horns which are backed by 12v from purple wires from the fusebox. Prior to 1977, with the exception of 1970, the horn button was on the steering wheel and picked up its earth from the body via the crossmember, rack, steering column U/J and column. That earth path is very convoluted with many mechanical connections which can give poor electrical connectivity. For that reason in the event of weak horns [installing a relay](#) may be much simpler than trying to improve the mechanical connections. In 1970, 1977 and 1978 the horn push was on the indicator column stalk and had a wired earth from the harness which did not suffer from that problem.



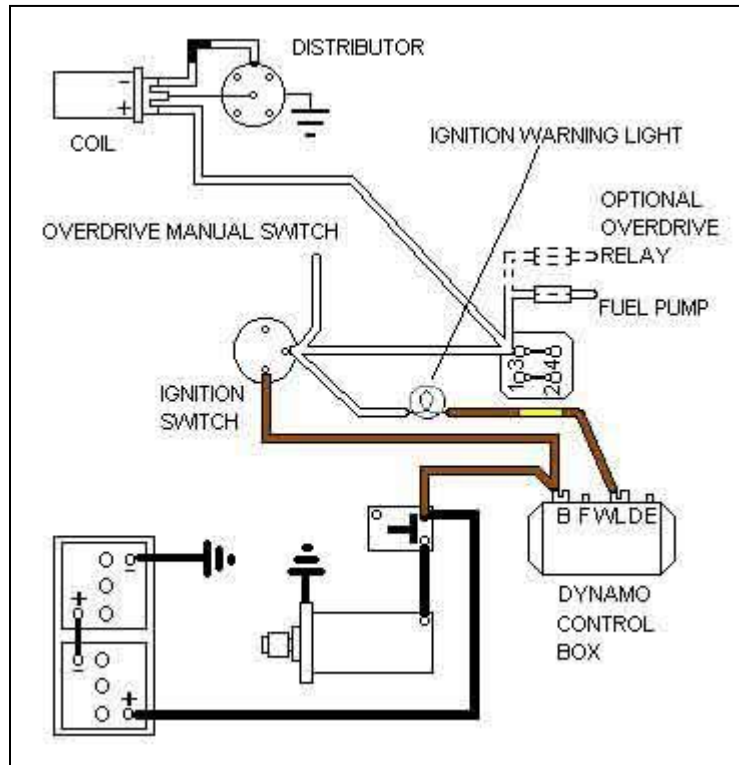
1-wire Horns

For the 1979 year on the horn push supplies a switched 12v supply to the horns, which pick up their earth return from their physical mountings. Relay option not shown for this as any bad connections should be relatively easy to solve, unlike the convoluted earth path of the pre-77 2-wire horns.

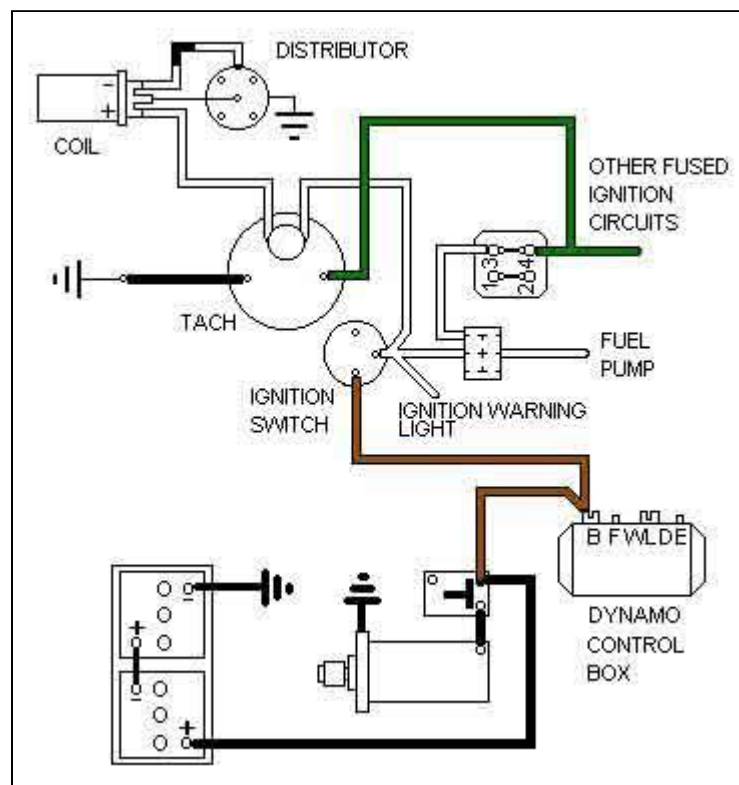


Ignition Systems

Ignition - 12v coil, mechanical rev-counter (62-64)



Ignition - 12v coil and inductive tach (64-72)



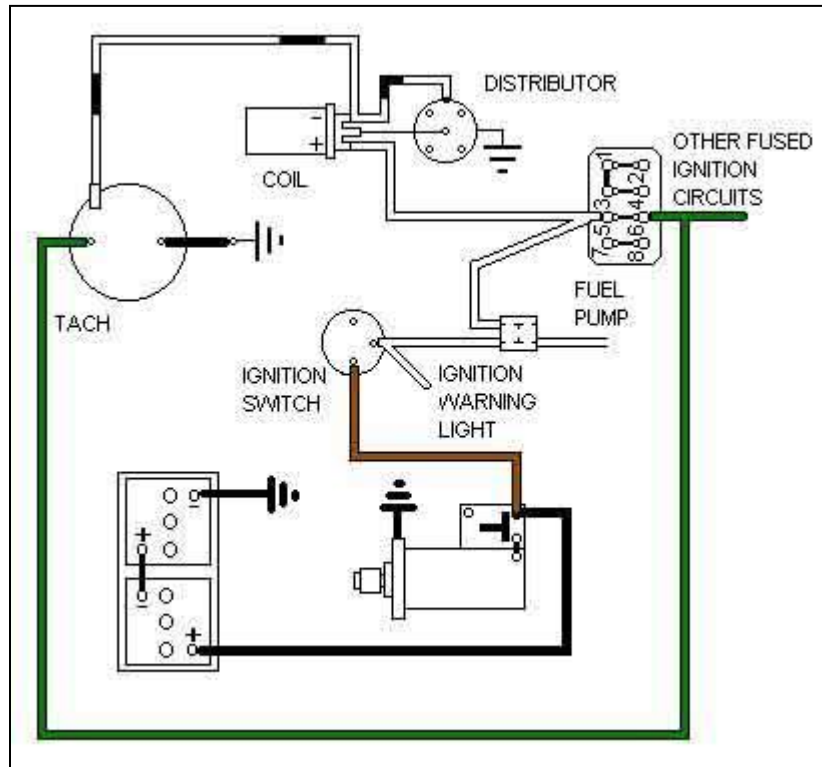
Note 1: Dynamo up to 1967, alternator after that.

Note 2: Tach powered from white up to 1967, from green after that.

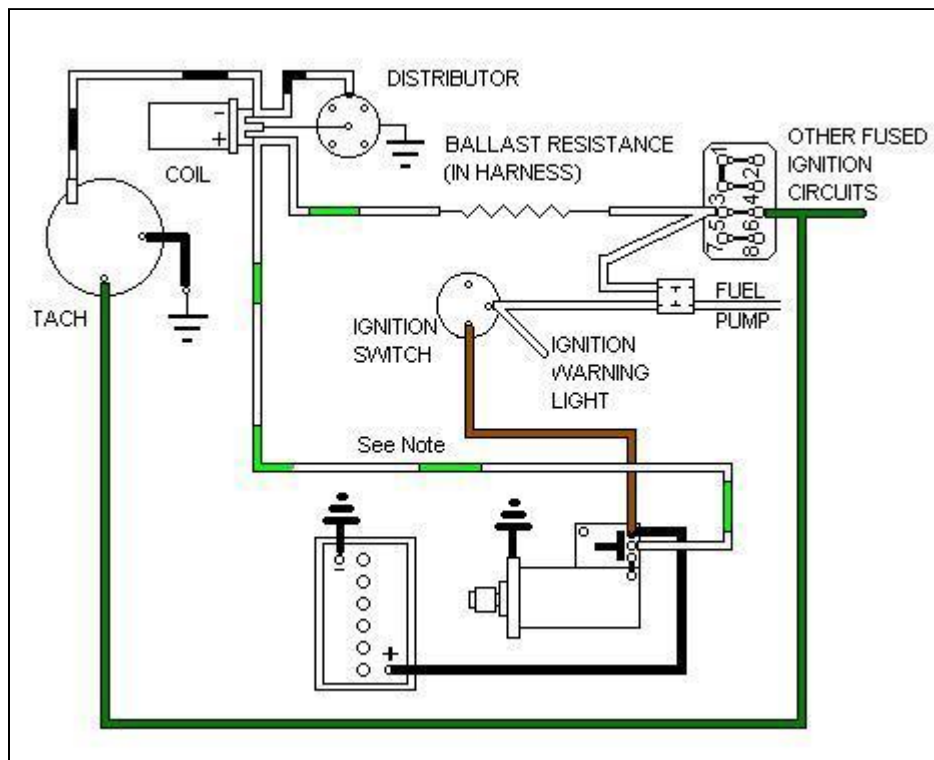
Note 3: [See here](#) for the overdrive wiring which changed for the Mk2

Note 4: Two-fuse block up to 1969, four-fuse after that.

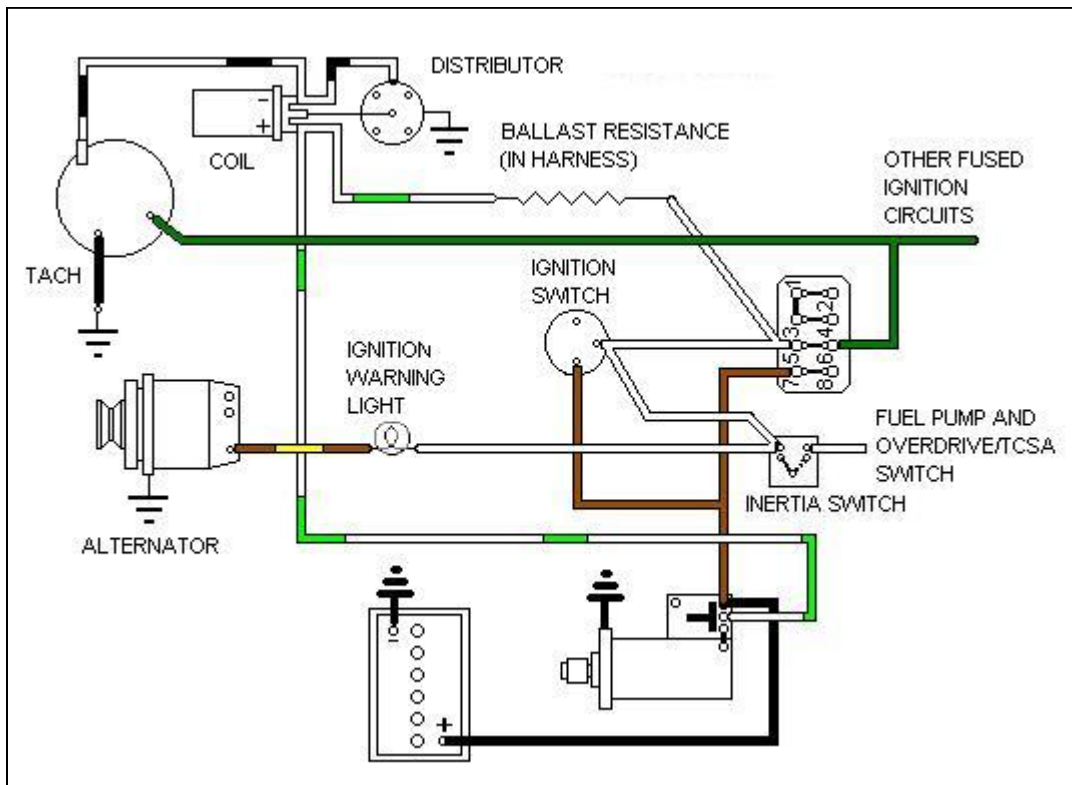
Ignition - 12v coil, voltage tach (73-74 1/2)



Ignition - 6v coil (UK 1974 1/2-1976 and all V8)

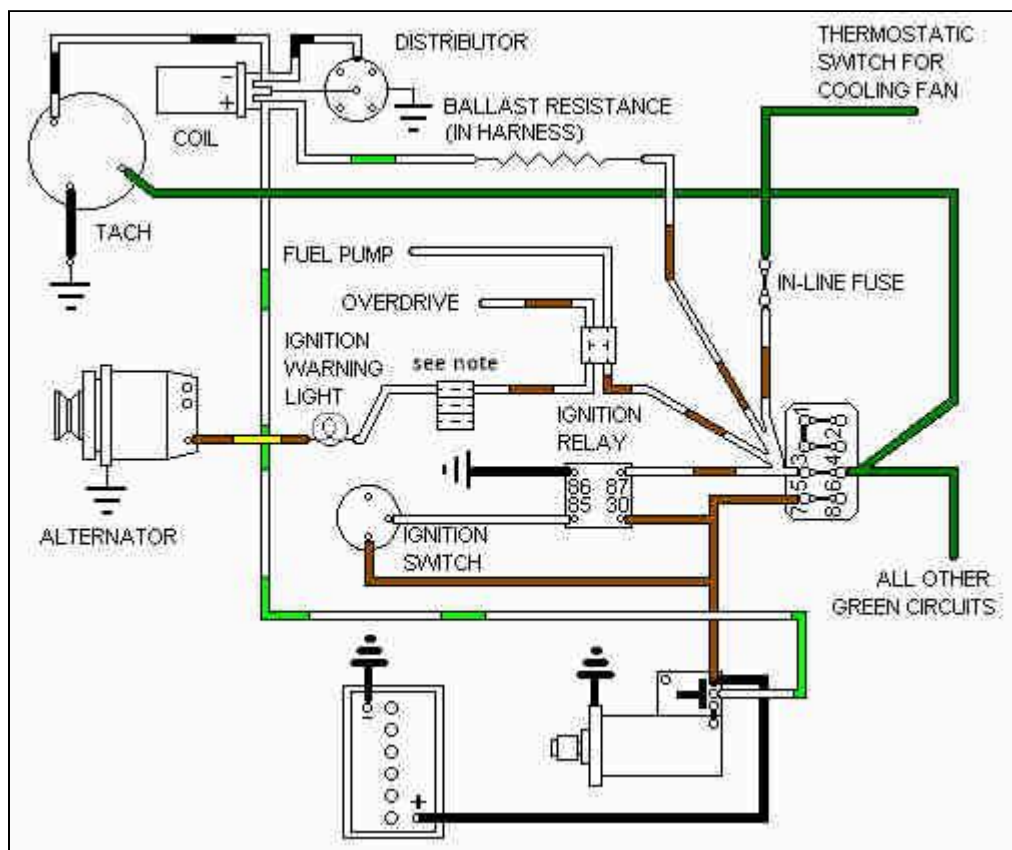


Ignition - 6v coil and points - North America (1974 1/2-1975)



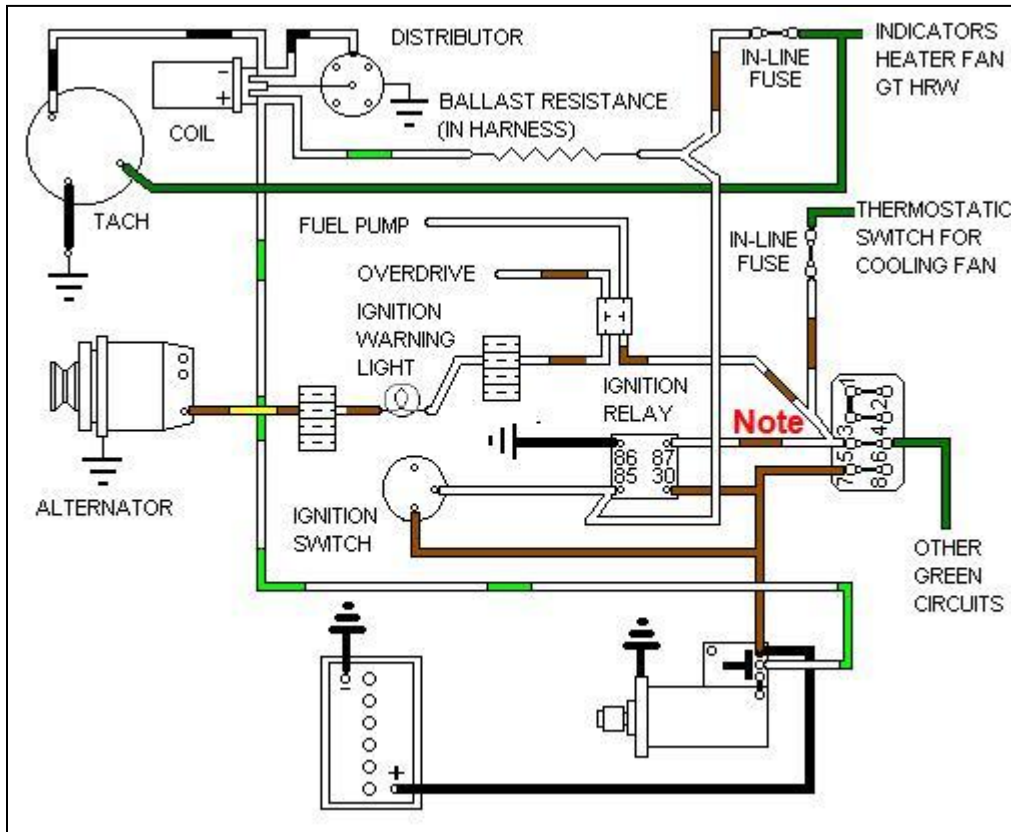
Note: The schematic for 1975 models does **not** show the second light-green/white wire from the coil +ve to the solenoid, but they do for 76 and later. It's not known whether this is an error in the schematic or an omission in the harness and solenoid, I can't think of any reason why it should be intended to be like that.

Ignition - Ignition Relay, UK (1977)



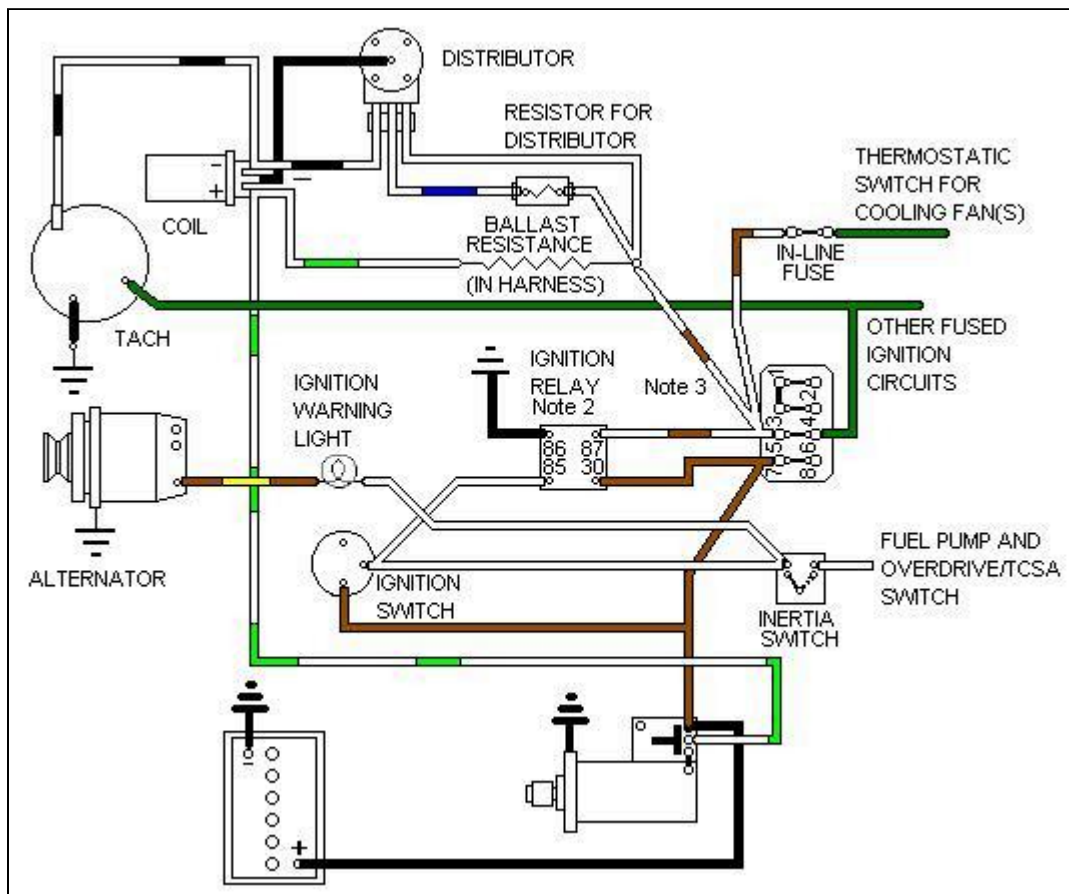
Note: This is one of three multi-way plugs behind the dash.

Ignition - Ignition Relay, UK (78-on)



Note: This is one of three multi-way plugs behind the dash.

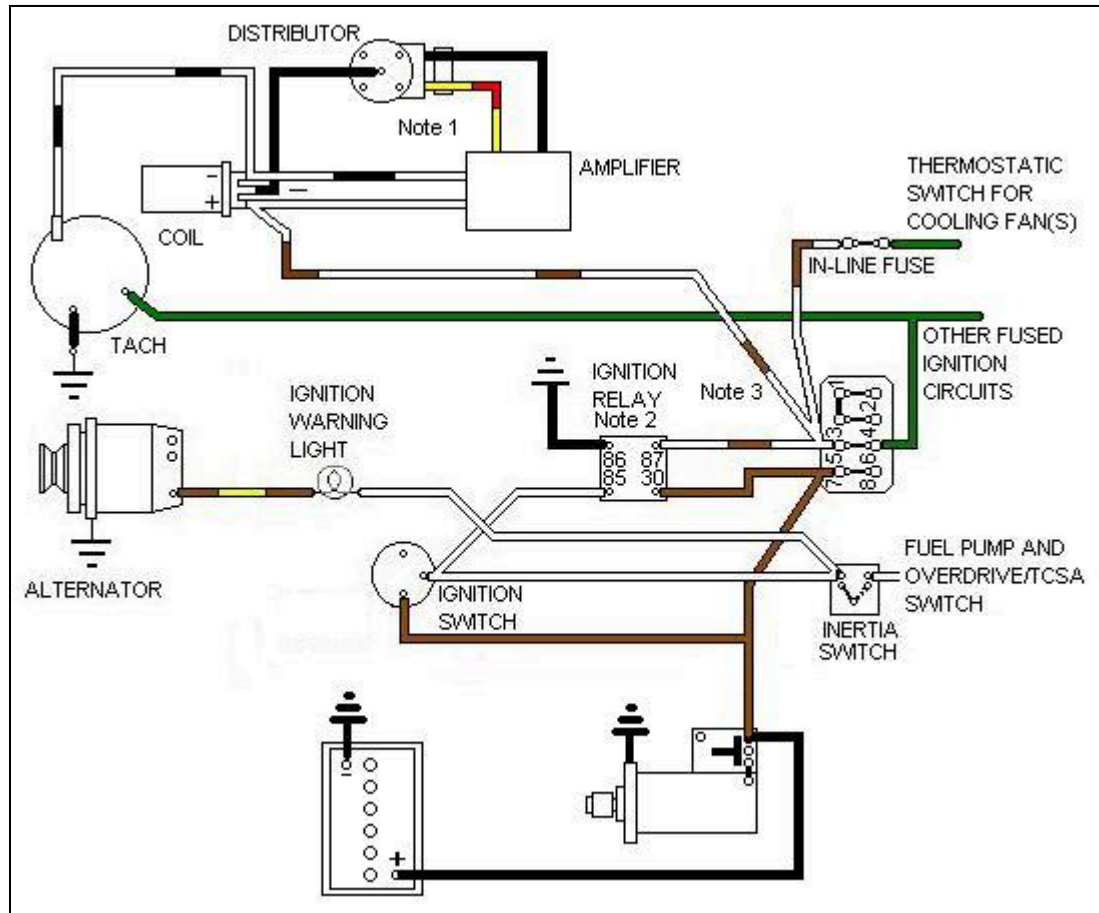
Ignition - 45DE4 Distributor (integral amplifier, 75-on)



Note 1: Fitted to North American cars only, this troublesome 45DE system was often dealer-replaced with the much [more reliable 45DM system](#).

Note 2: Ignition relay fitted from 1977 only, in 1976 the white from the ignition switch went direct to the fusebox and ignition components and there was no electric cooling fan.

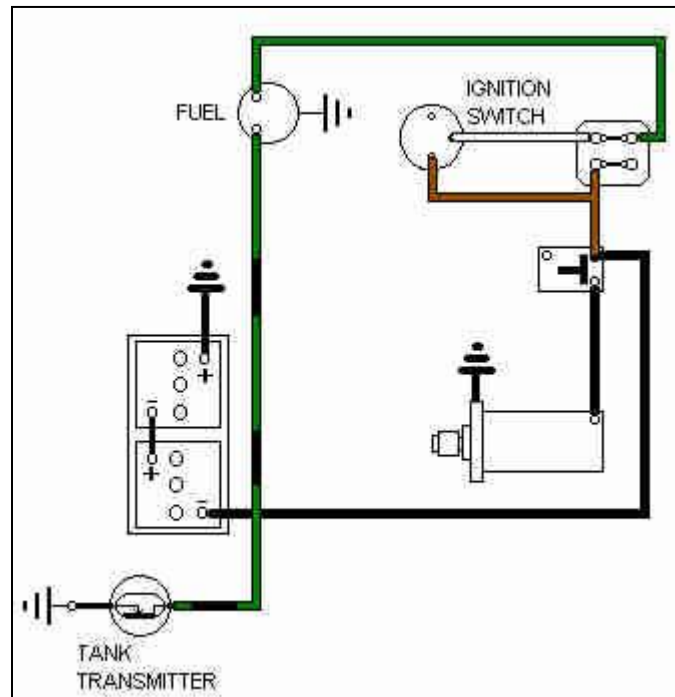
Ignition - 45DM4 Distributor (remote amplifier, 75-on)



Note 1: Fitted to North American cars only.

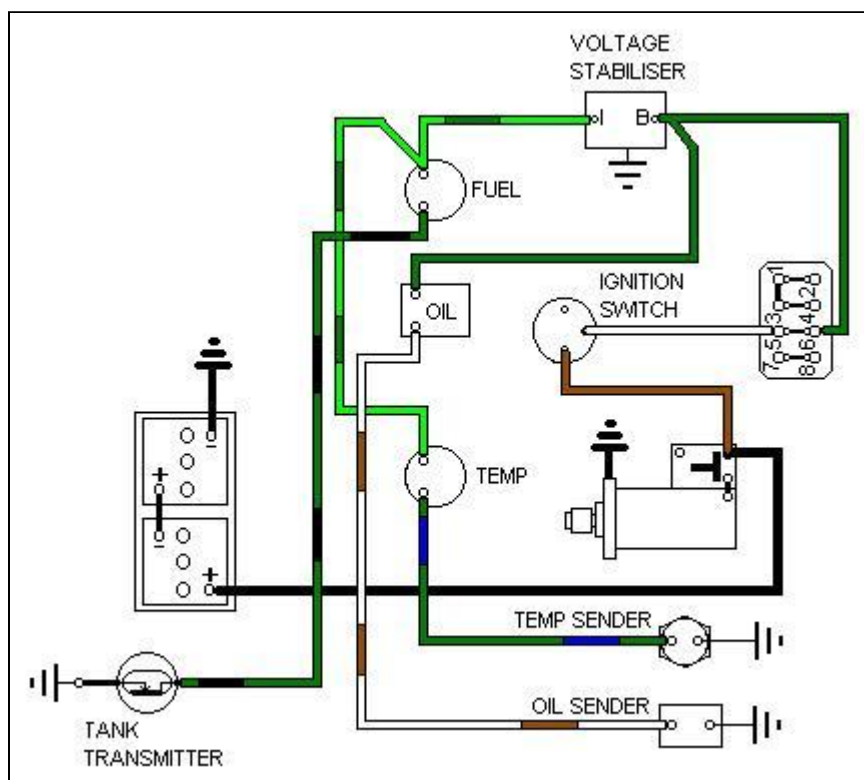
Instruments

Early system - internally stabilised:



Note: The gauge earth is required for its correct functioning as well as for its illumination, and the green and green/black wires need to be connected the right way round to function correctly.

Late system - external stabiliser module:

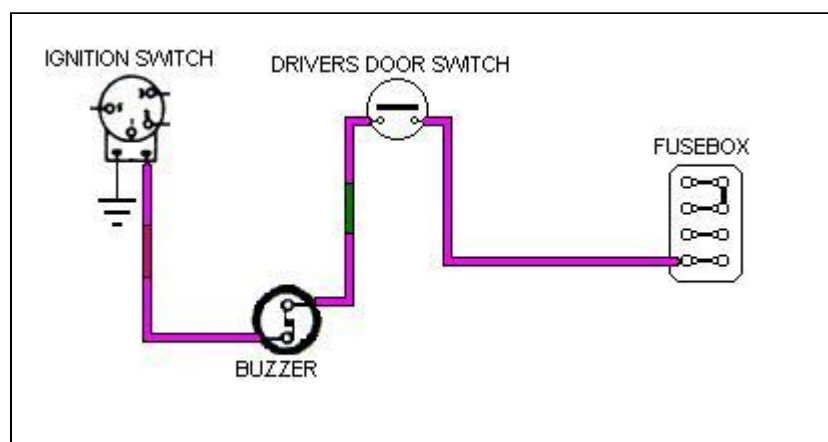


Notes:

1. These gauges can be connected either way round. Oil and temp gauges only applicable where electric units are fitted in place of capillary units.
2. For the first year of the North American padded dash and electric oil and temp gauges (Mk2, 1967) instead of a light-green/green wire coming from the instrument voltage stabiliser to the first gauge (fuel) it is shown as a green wire. This wire then daisy-chains to the **oil** gauge as a light-green/green, then daisy-chains from there to the temp gauge as a green again. After this first year the schematics are as above i.e. only the fuel and electric temp gauges are fed from the stabiliser with a light-green/green, the oil gauge is fed direct with a green. Apart from the different wire colour the oil gauge being fed from the stabiliser **could** have been required if a non-stabilising sender had been used for just that year, but the Parts Catalogue doesn't show that. Certainly the later sender was an industry-standard device which included its own stabilisation function as well as pressure transducer. Therefore it either **was** connected to the stabiliser, erroneously, or it is an error on the schematic. With two separate stabilisation circuits in series I would expect the oil gauge to read low, meaning that perhaps it is just a schematic error.
3. North America reverted to a capillary oil gauge in 1972 for the remainder of production.
4. UK always had a capillary oil gauge, and the temp gauge only became electric in 1977.
5. The schematics show this as white/brown as indicated, which is the same colour as from the starter relay to the starter solenoid on 1971 models. However that wire will be a heavy gauge and the oil gauge wire standard gauge.
6. Prior to the latter part of the 72 model year all the factory schematics show the sender as using a wired earth back to a number-plate bolt on the rear panel. At that point North American schematics imply this changed to an earth picked up from its attachment to the tank, but RHD schematics show the wired earth carrying on until the 1977 model year when the sender changed to one incorporating the fuel pick-up. However my UK 73 has a wired earth in the harness tail, but my 75 V8 does not and neither does an North American 1976. The [routing of the sender tail also changed](#) at some point between 73 and 75, possibly both changed with rubber bumpers.

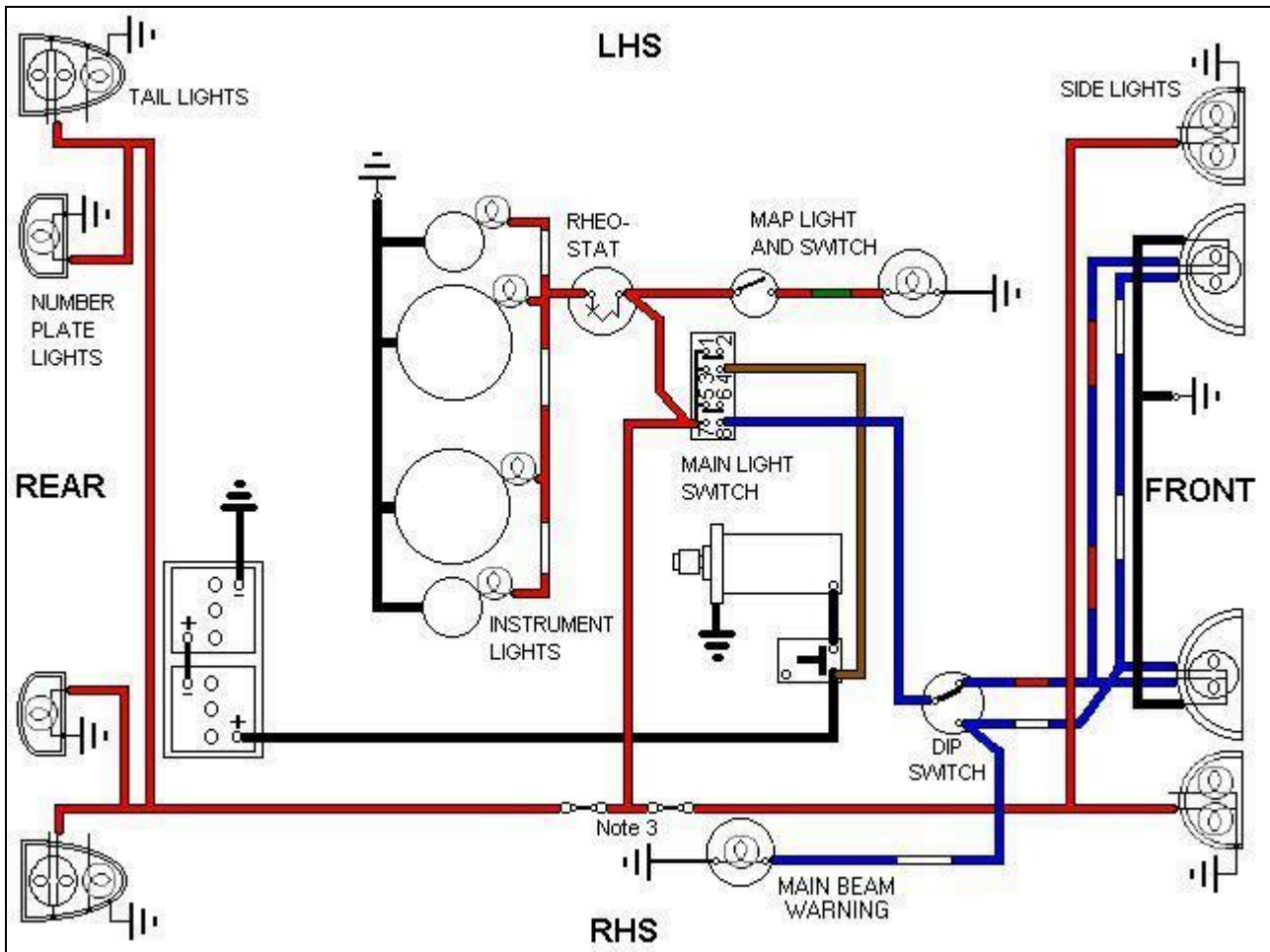
"Key In" Warning

North America 1970-on



Lighting Systems

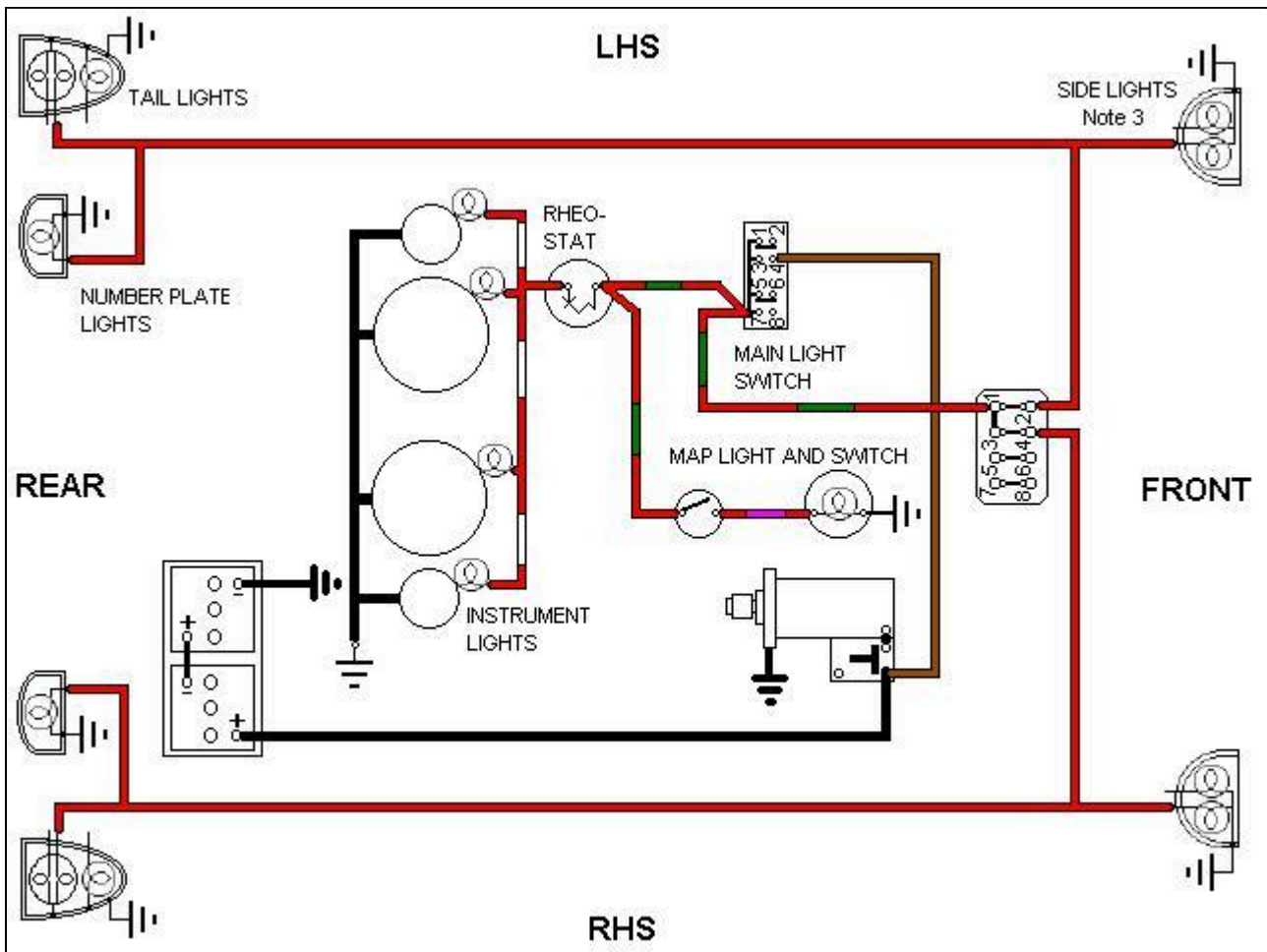
Head lights and parking lights Mk1 and Mk2 68 and 69



Notes:

- 1: Blue/white is main beam, blue/red is dipped beam.
- 2: Parking lights were unfused on Mk I cars.
- 3: Mk II cars for 68 and 69 had in-line 10A fuses for the parking lights (one for the front and one for the rear), fitted at the bullet connectors where the main and rear harnesses joined together.
- 4: Dip-switch moved from floor to column stalk for North America in 1968.
- 5: Mk1 cars had a map light available when the parking lights were on. Mk2 cars for 68 and 69 may have had a courtesy light operated from door switches as well as the map light.
- 6: Mk2 LHD cars up to 1971 have a panel light switch on the steering column in place of a rheostat on the dash.

Parking lights 1970-on



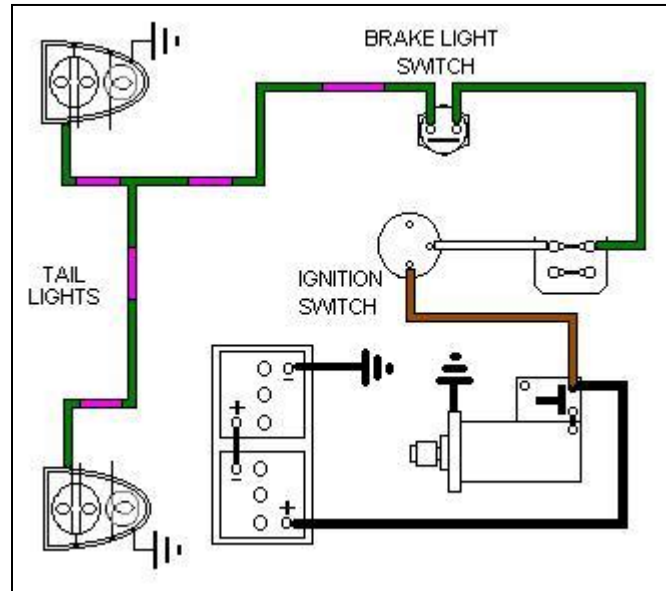
Notes:

1. Headlamp and instrument light wiring is much the same as for earlier cars, except that the dip-switch has now moved to the column stalk for all markets.
2. From 1970 the parking lights were fused from the main fuse box, one fuse for each side. At least that was the intention, but with four separate connections to the fusebox they can be cross-connected so that one fuse feeds right front and left rear, and the other fuse left front and right rear.
3. Also from 1970 North America used a dual-filament 21w/6w bulb for the indicators and the parking lights behind an all-amber lens, and this continued with rubber bumpers.
4. 1970 (all) and 1971 (UK only) models may have had a courtesy light operated from the door switches as well as the map light and switch, now available all the time. After that all models had the courtesy light controlled from door switches only i.e. no map light.
5. 1971 models on had boot (roadster) and load-space (GT) courtesy lights.
6. 1970 LHD cars have a panel light switch on the steering column, reverting to a rheostat on the dash for 1971.
7. Rubber bumper models (and North American 1974 models with the split rear bumper) have the number plate lights mounted on the number plate backing plate and wired earths back to the bullets for the reversing lights.
8. RHD rubber bumper cars had the front parking lights inside the headlights and used the same wired earth, the indicators are mounted in the bumper and also have a wired earth. North American had dual filament bulbs behind an all-orange lens for both parking lights and indicators.
9. North American cars with side-marker lights therefore had three lamp units needing an earth on each side, and with the main harness having two earth wires by the right-hand headlight (one from the earthing point the other to the left-hand headlight) means there are

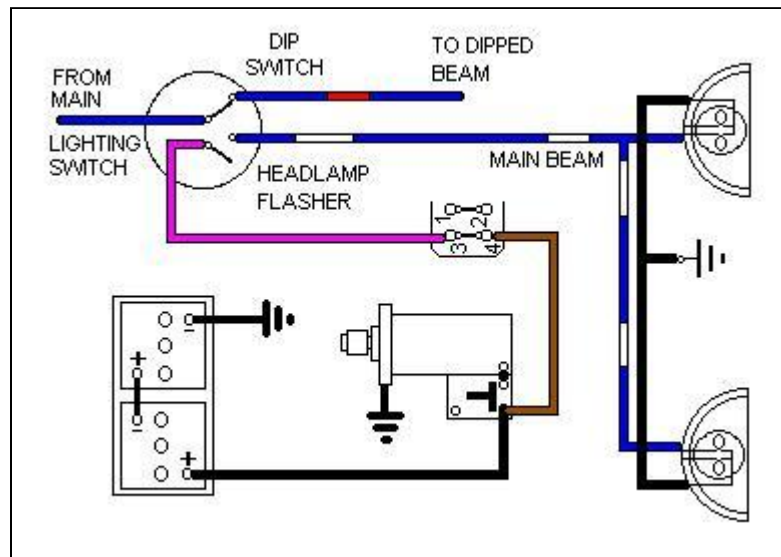
five earth wires to be connected together by the right-hand headlight, and used a 6-way bullet connector. The left-hand side used a 4-way.

10. 1977 and later models have the main lighting switch on the steering column cowl.
11. 1977 and later models had dash switches (not the main lighting switch) and heater controls illuminated at night, together with the gauges, clock etc.

Brake Lights

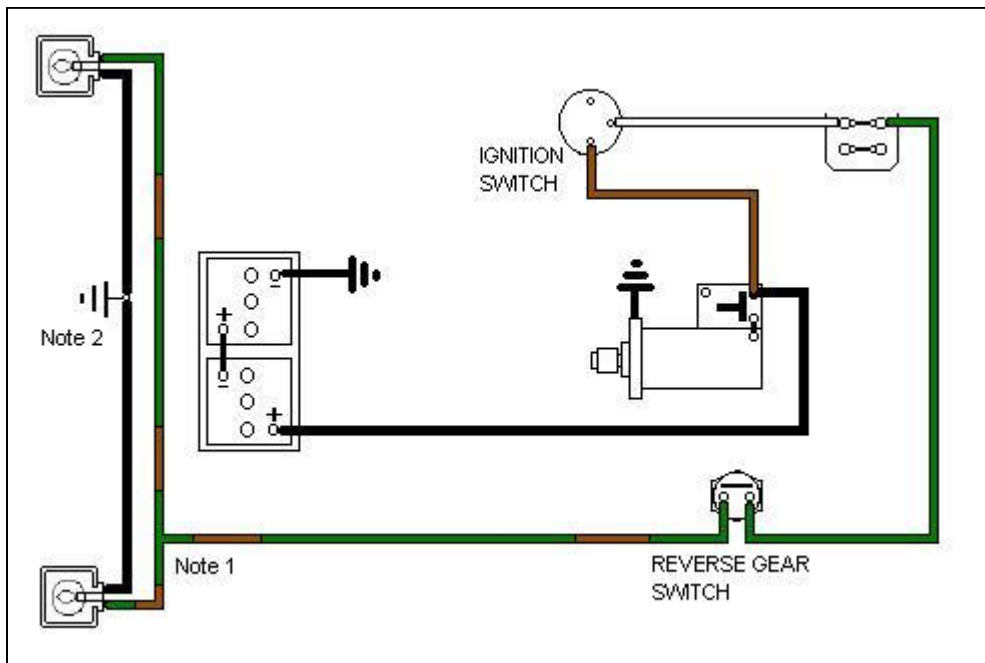


Headlamp Flasher



Note: Column-mounted dip-switch/headlamp flasher shown. For the earlier floor-mounted dip-switch the blue/white from the column flasher switch joins the rest of the circuit by the floor-mounted switch.

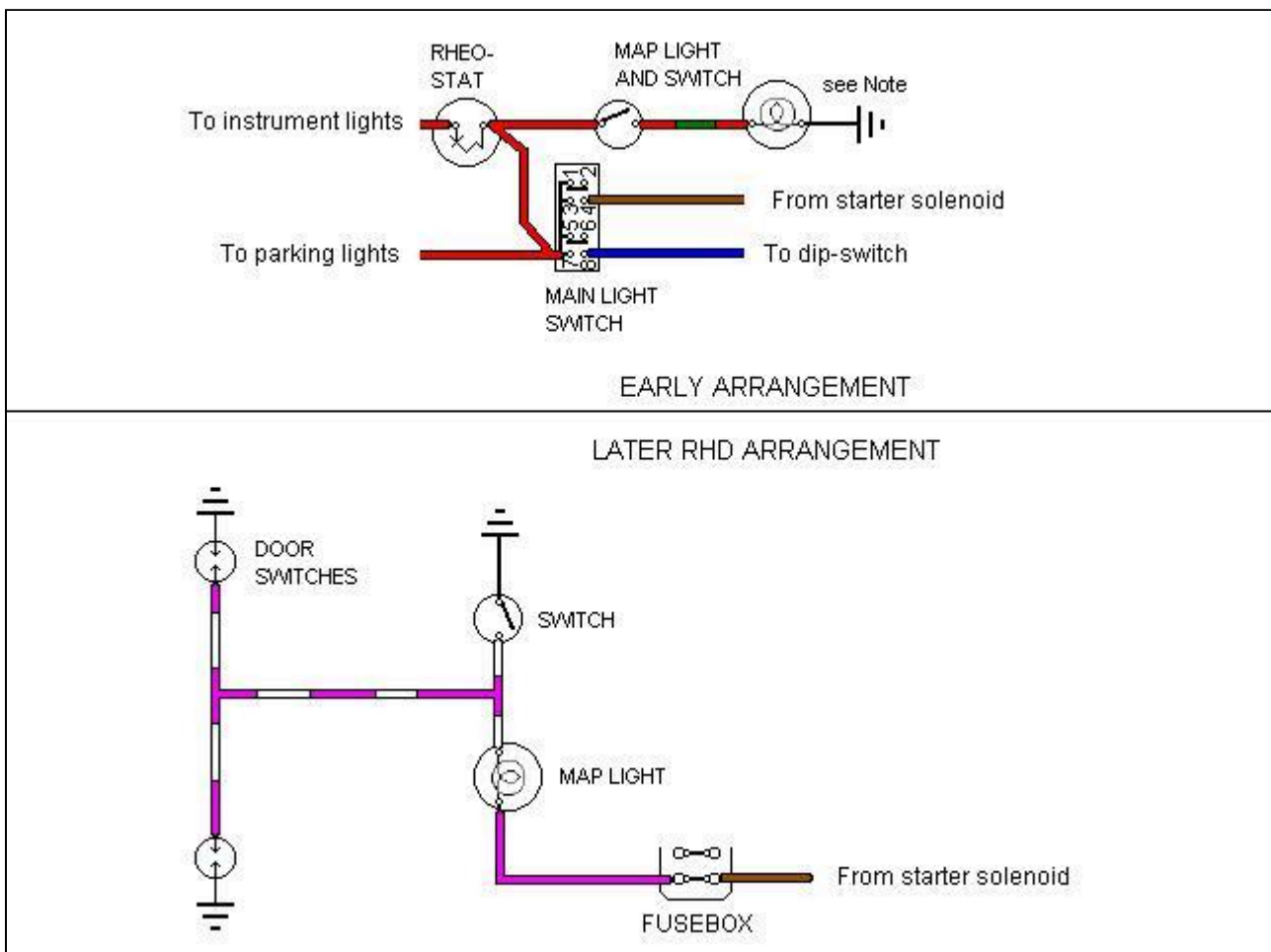
Reversing Lights



Note 1: The junction in the green/brown for the two reversing lights is done with a sealed connection under the off-side light and not with bullet connectors. This is because the connection to the light units is with a plug and socket instead of with tails as is the case with all the other lights. A bullet connection between three wires all from the same harness would be pointless.

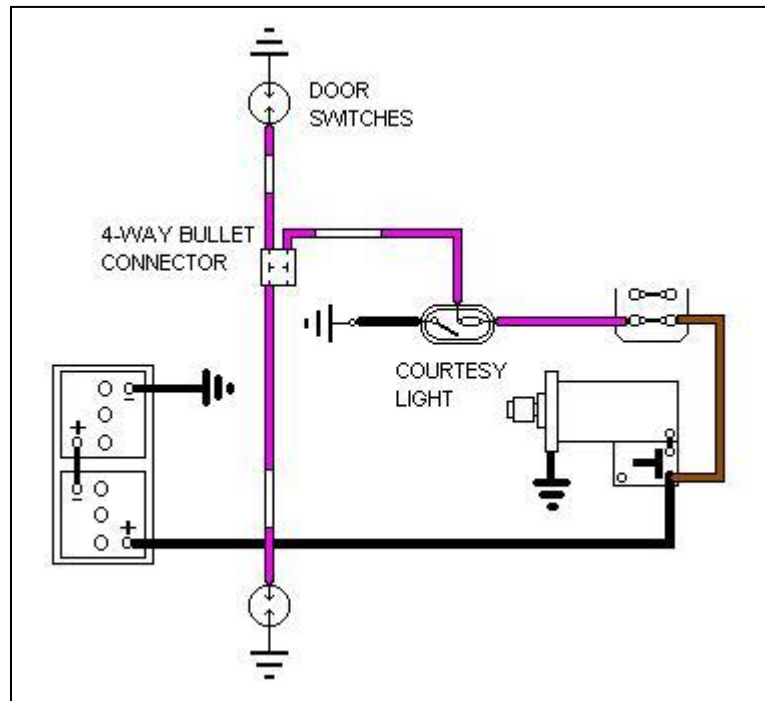
Note 2: Originally the two earth wires go to a number-plate mounting bolt. Possibly all RB cars but definitely 1977 and later (and 1974 North American with chrome split rear bumper) those earth wires go via bullets shared with the earth wires for the number-plate lamps.

Map Light



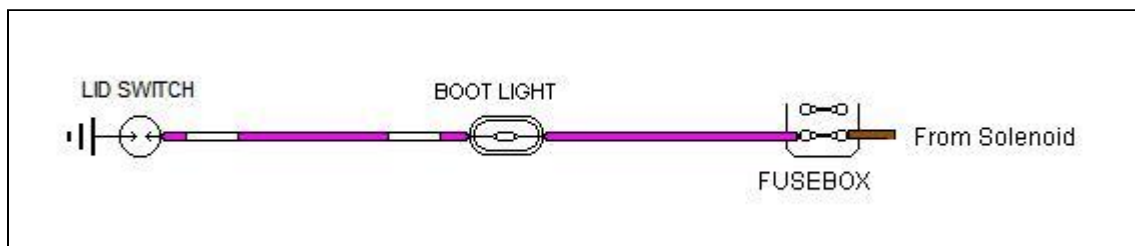
Note: Shown as earthing through its mountings i.e. a single wire to the bulb holder on RHD and Mk1 LHD schematics but a wired earth on North American Mk2-on schematics.

Courtesy Light

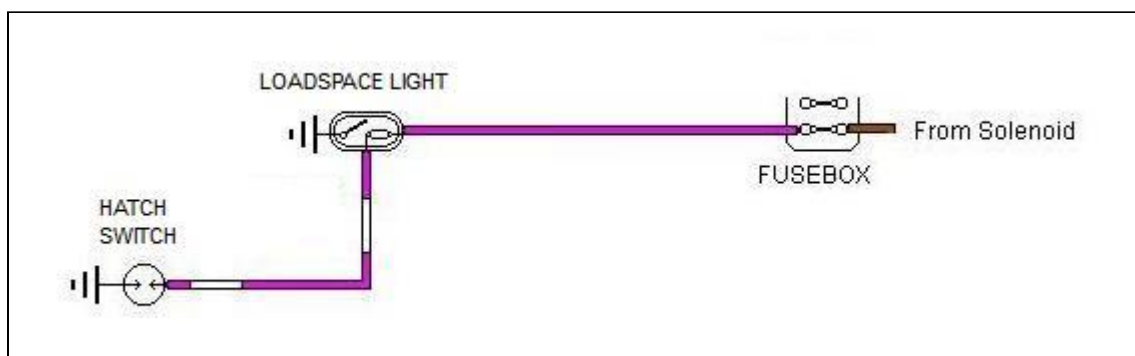


Note: Haynes issue dated 2010 with coloured schematics has an error in the drawing of the courtesy light for 1973 cars, and later - they have reversed the 12v (purple) and earth (black) connections, putting 12v to the switch and earth to the bulb. Wired that way it wouldn't work at all from either the door switches or the manual switch, but if both are operated at the same it will blow the purple circuit fuse. Earlier versions e.g. my 1989 copy are drawn correctly.

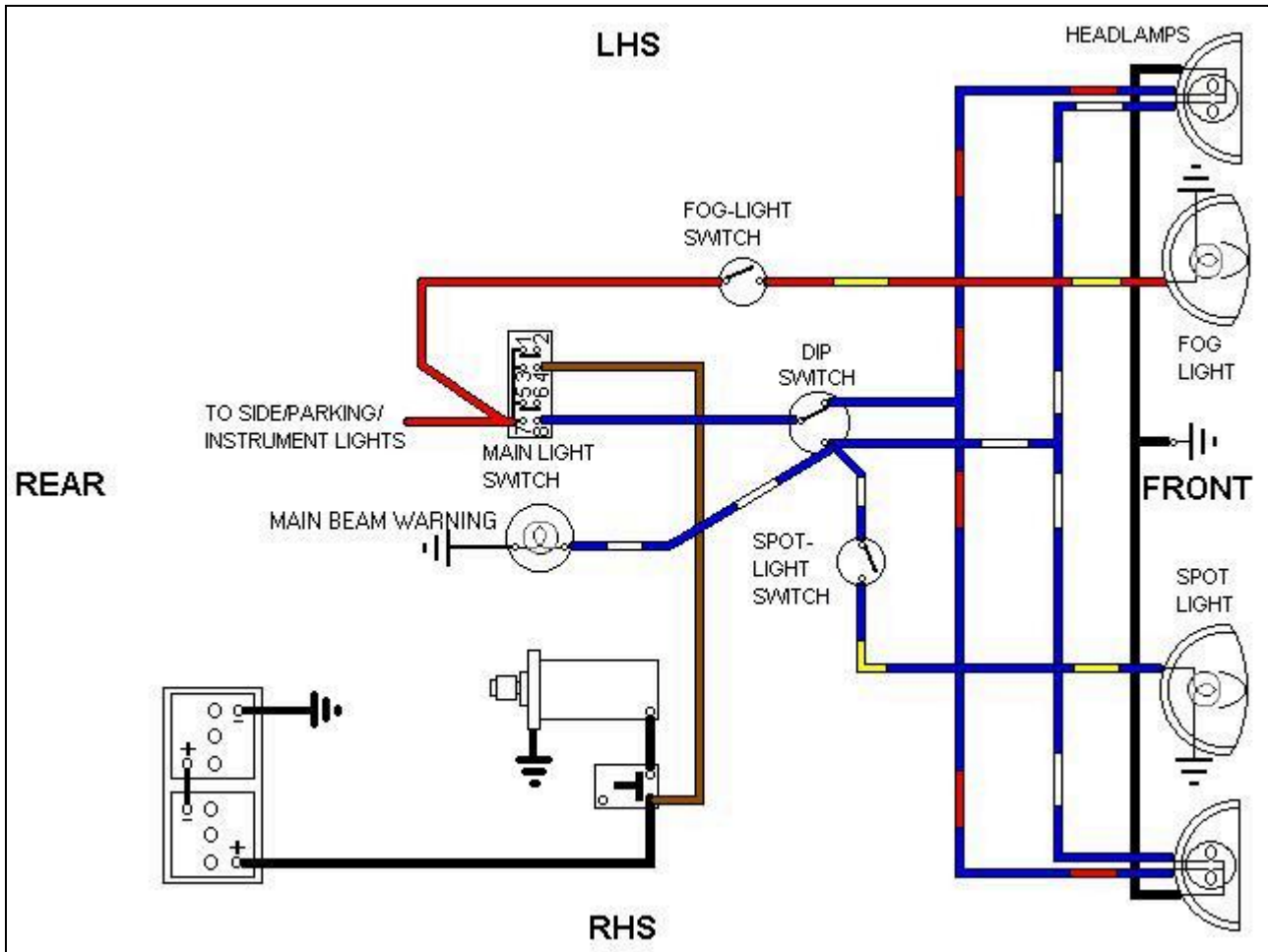
Roadster boot light



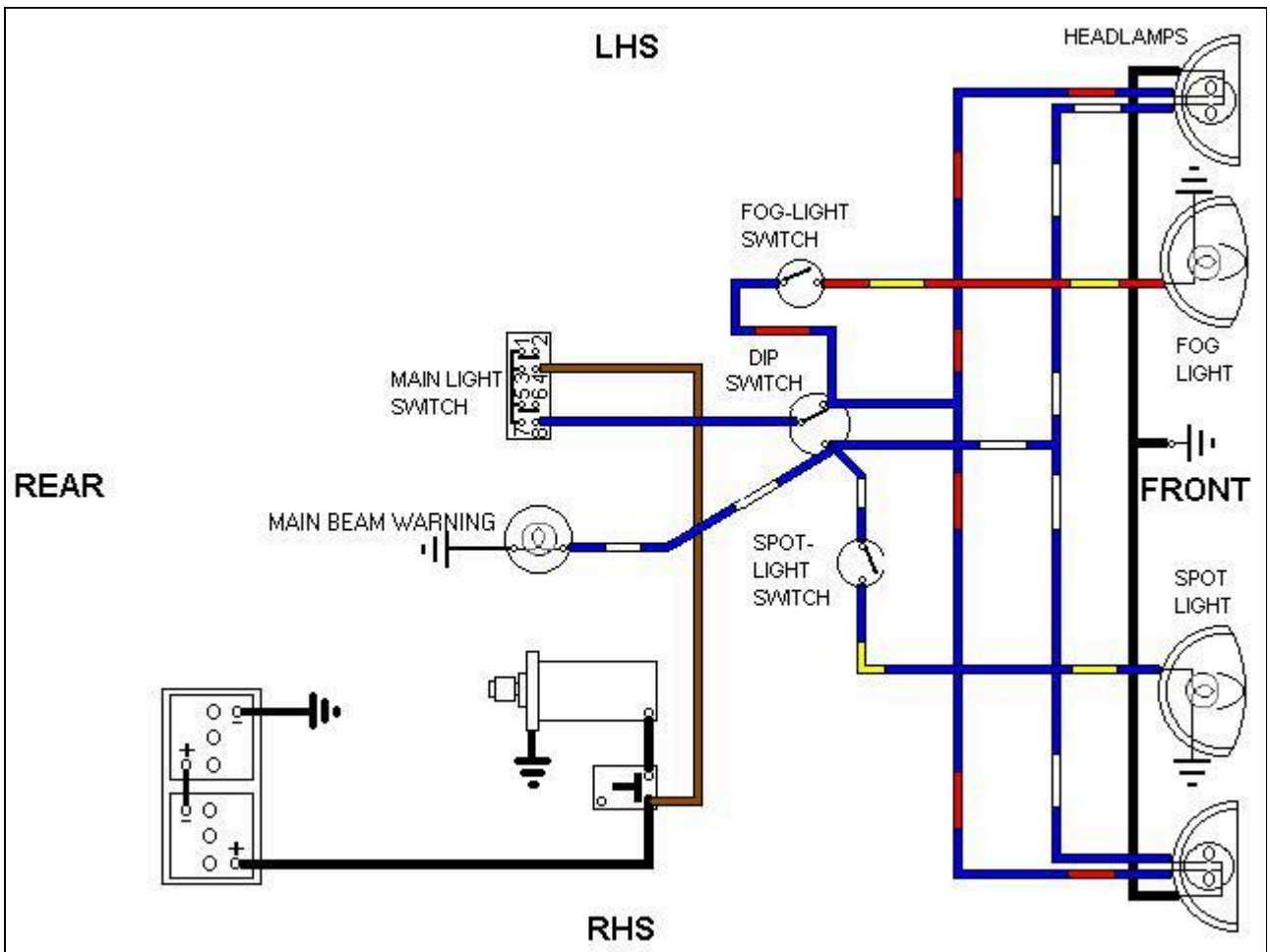
GT loadspace light



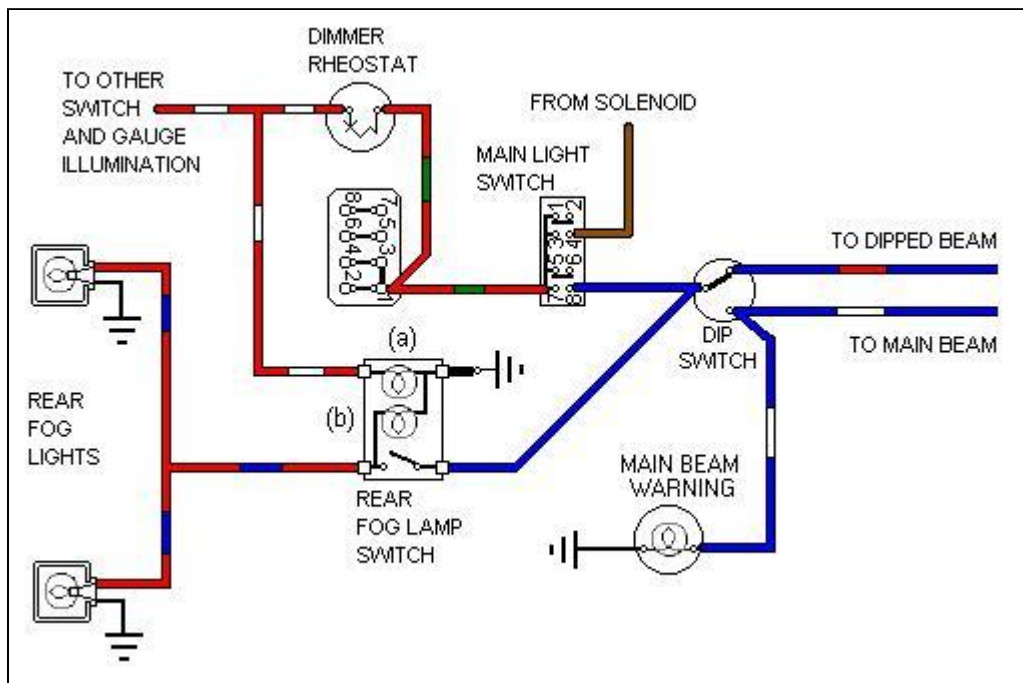
Fog & Spot Lights, Factory-fitted, 62-70



Fog & Spot Lights, Factory-fitted, 70 on



Rear Fog Lights, Factory-fitted, 1980 on

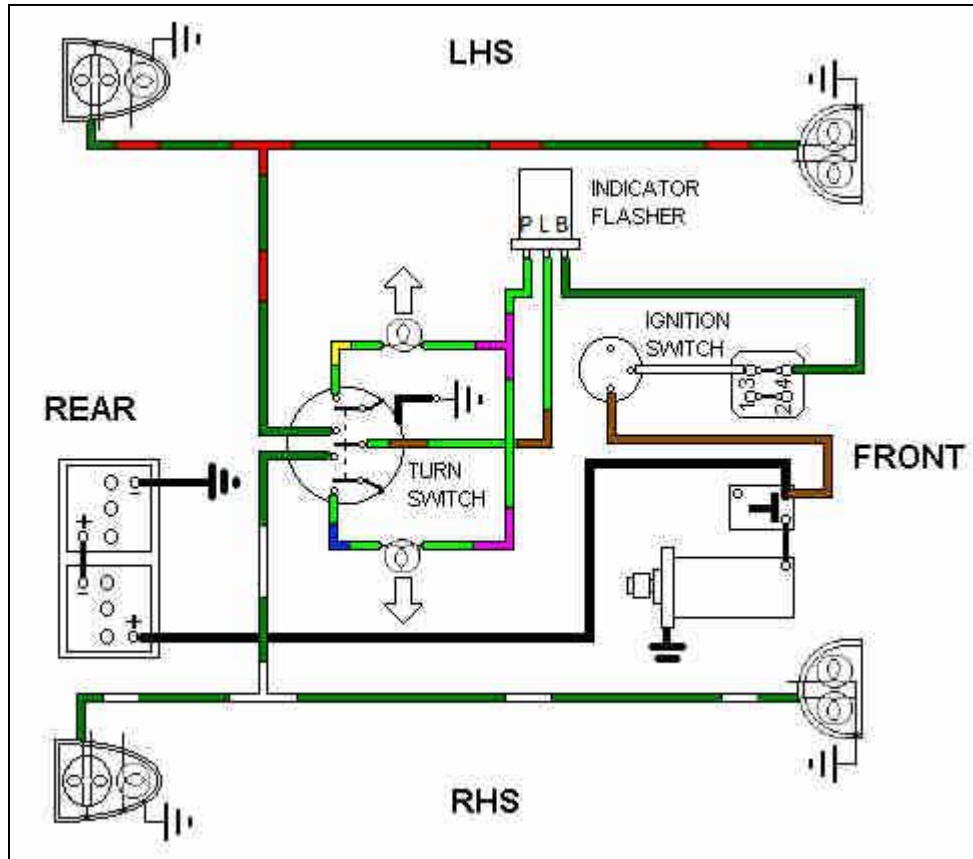


Note that the rear fog-guard switch needs a tell-tale warning of some kind to pass the UK MOT. This can be as simple as a coloured tag only visible when the switch is in the operated position, or a tell-tale light. As there appears to be no external tell-tale (Clausager doesn't mention one and I have not seen a diagram for this year) on the face of it that would mean two bulbs in the switch - one for the night-time illumination that all the 77 and on rocker switches had, and another for

the tell-tale. And from Stephen Aitken on the MGOC Forum this is indeed the case - (a) above being the night-time illumination and (b) the tell-tale.

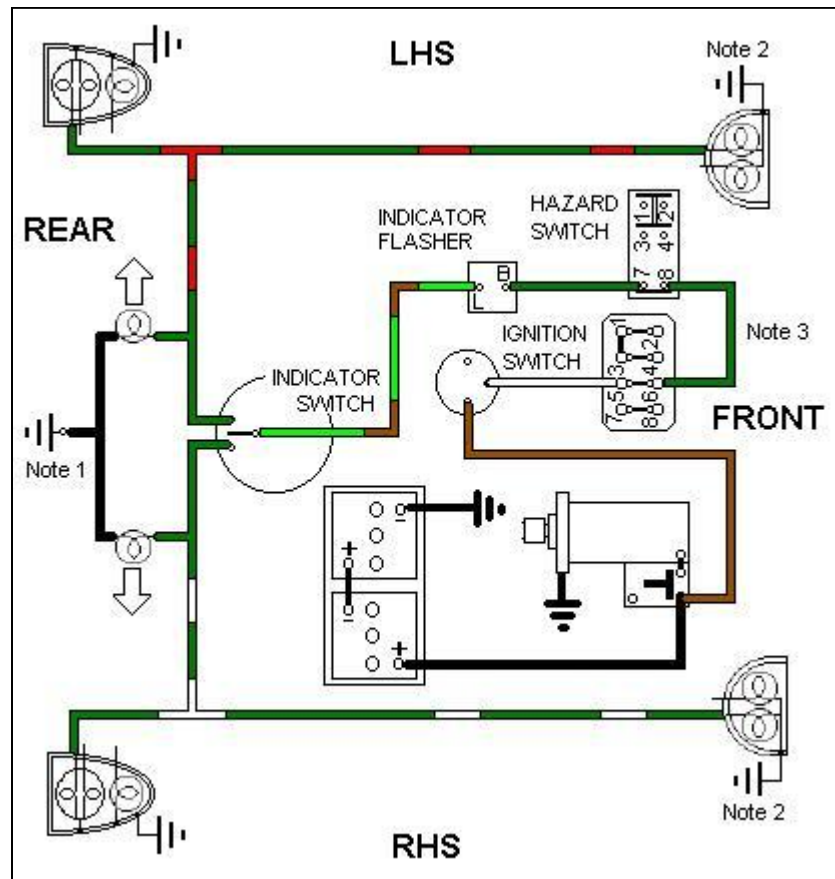
Indicators

Mk1



Flasher unit GFU103 or FL5. Note: The 'B' terminal can be labelled 'X'.

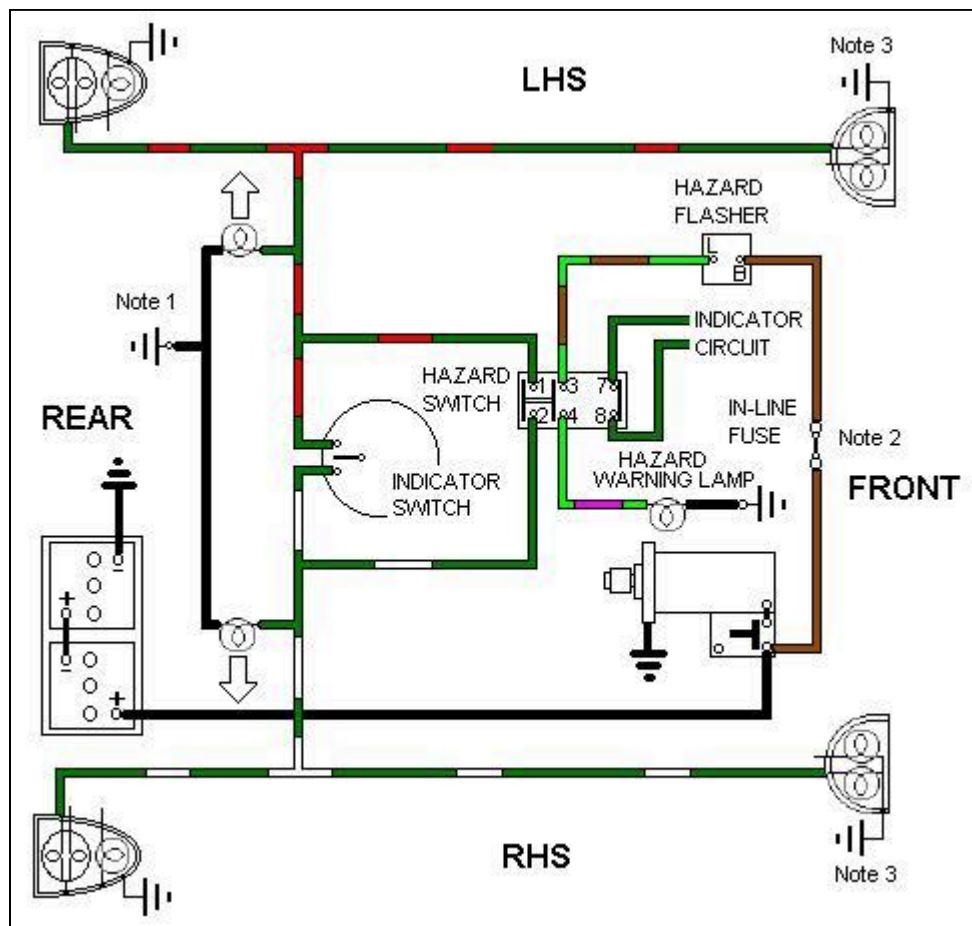
Mk2 and later



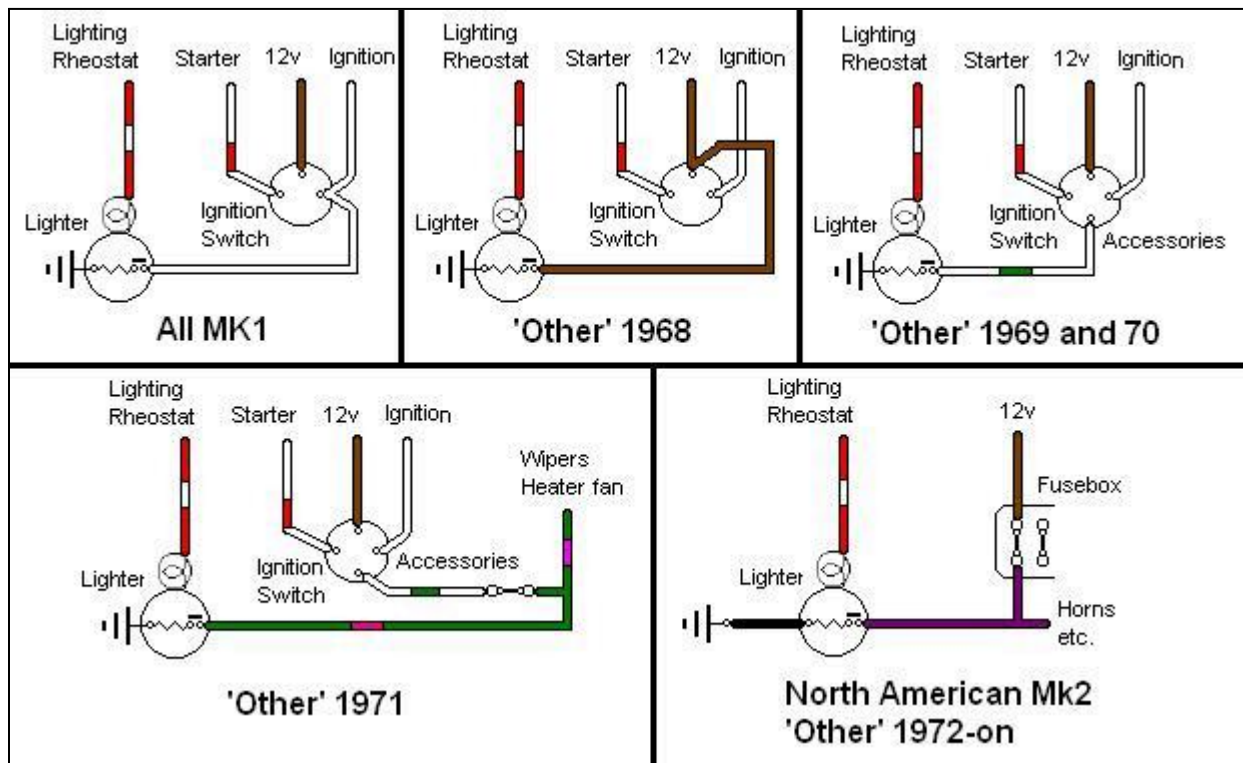
Notes:

1. Flasher unit SFB118 or FL8.
2. (For cars without hazard flashers the Green goes direct from fuse box to indicator flasher.
3. UK Mk2 schematics indicate there is a local earth for each tell-tale from their physical mountings and so only one wire to the bulb holder. My 73 (and I suspect all tin-dash cars) is like that. Padded-dash and all RBs and V8s have a second wire providing an earth as they are mounted on plastic panels.
4. From 1970 North America used a dual-filament 21w/6w bulb for the indicators and the parking lights behind an all-amber lens, and this continued with rubber bumpers. For other markets chrome bumper cars continued with separate 21w indicator and 6w parking bulbs, with amber and white lenses respectively. For rubber bumpers those other markets changed to a single 21w bulb behind an amber lens in the bumper for indicators, and the parking lights were in the headlights. Both rubber bumper types have an earth wire connected to the main harness with the headlight and parking light earth wire.
5. 1977 and later models i.e. with an ignition relay have several different methods of fusing the green circuit, see [Ignition Schematics](#).

Hazard Warning



Lighter Socket

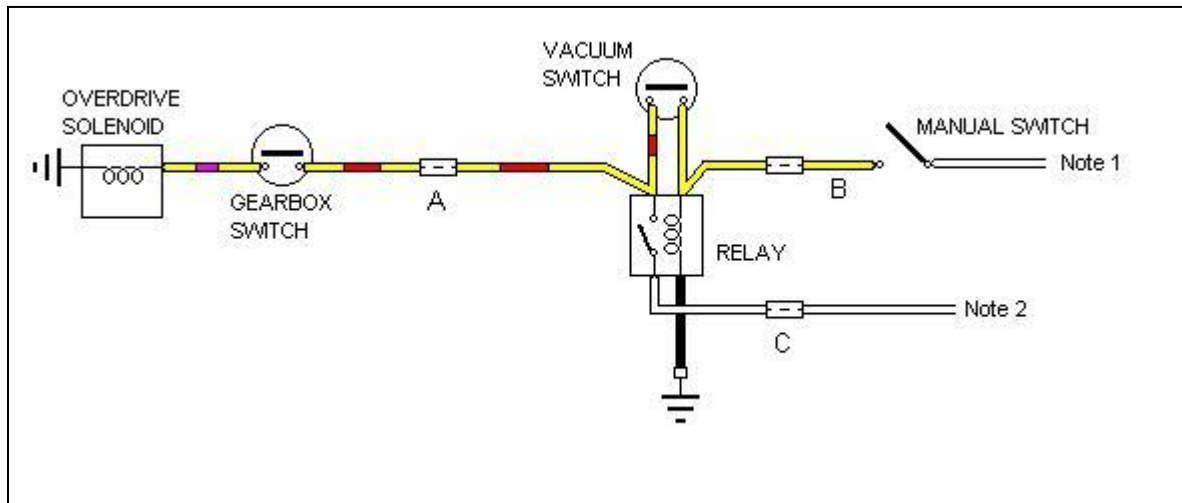


Note 1: 'Lighting Rheostat' is a simple on/off switch for North American spec Mk2 until 1970, when it changes back to a rheostat.

Note 2: A wired earth is needed where the lighter socket is in the plastic centre console on North American Mk2 and 1972 models for other markets. It may not be needed when dealer fitted to a bracket screwed to the metal dash, for example.

Overdrive

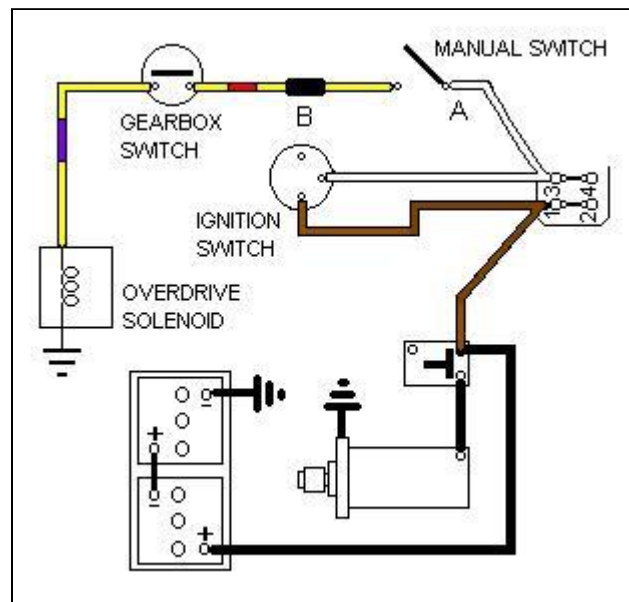
Overdrive - D-Type (to 67)



Note 1: On 62-64 cars the manual switch is wired back to the ignition switch. On 65 to 67 cars it is wired to terminal 3 of the fusebox.

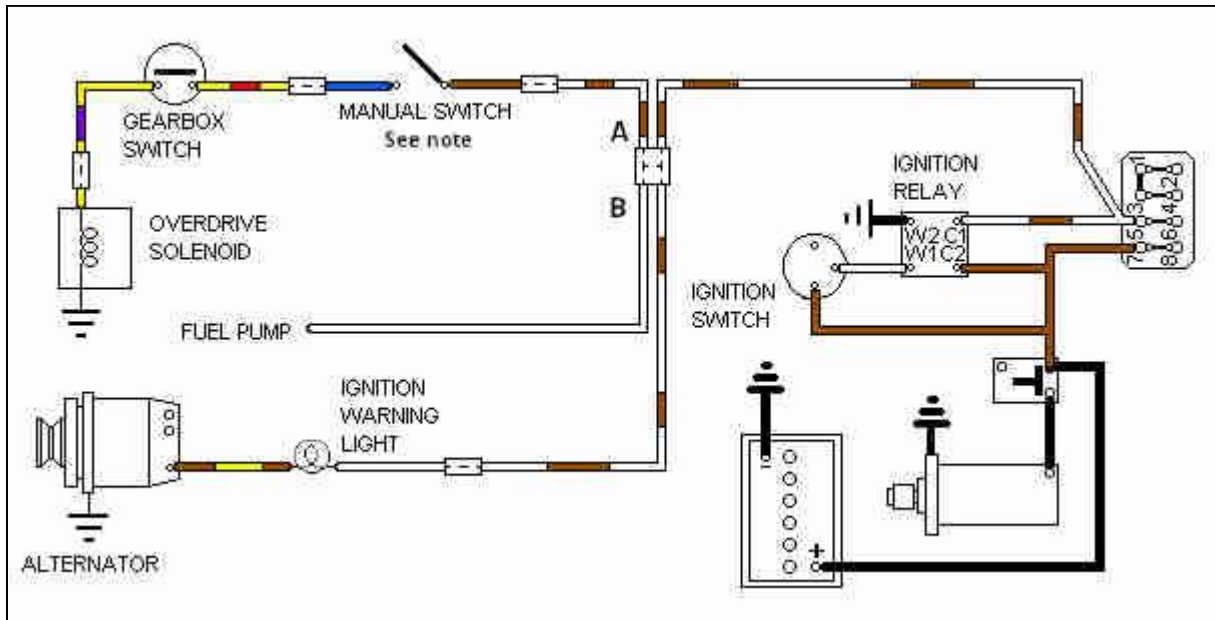
Note 2: On 62-64 cars the relay contact is wired back to terminal 3 of the fusebox. On 65-67 cars it is wired to a 6-way bullet connector in the mass where the main, rear, gearbox and OD harness all join together near the bulkhead.

LH type without ignition relay (68-76 and V8):



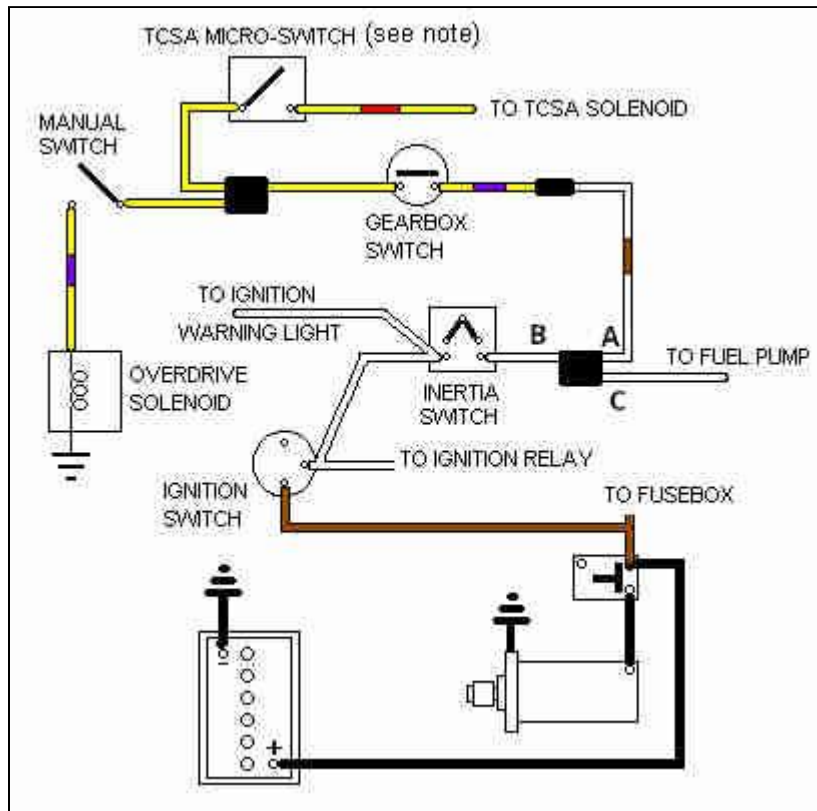
On cars with the dash-mounted manual switch to protect the most wiring insert the fuse in the white wire at A where it connects to the back of the switch. On cars with the column switch - to avoid cutting wires - insert it at B where the gearbox harness joins the main harness below the pedal box.

LH type with ignition relay - UK (77-on):



On cars with the gear-lever mounted switch to protect the most wiring a fuse can only be inserted at A where the gearbox harness joins the main harness. A second fuse to protect the rear harness and fuel pump can be inserted at B.

LH type with ignition relay - North America (77-on):



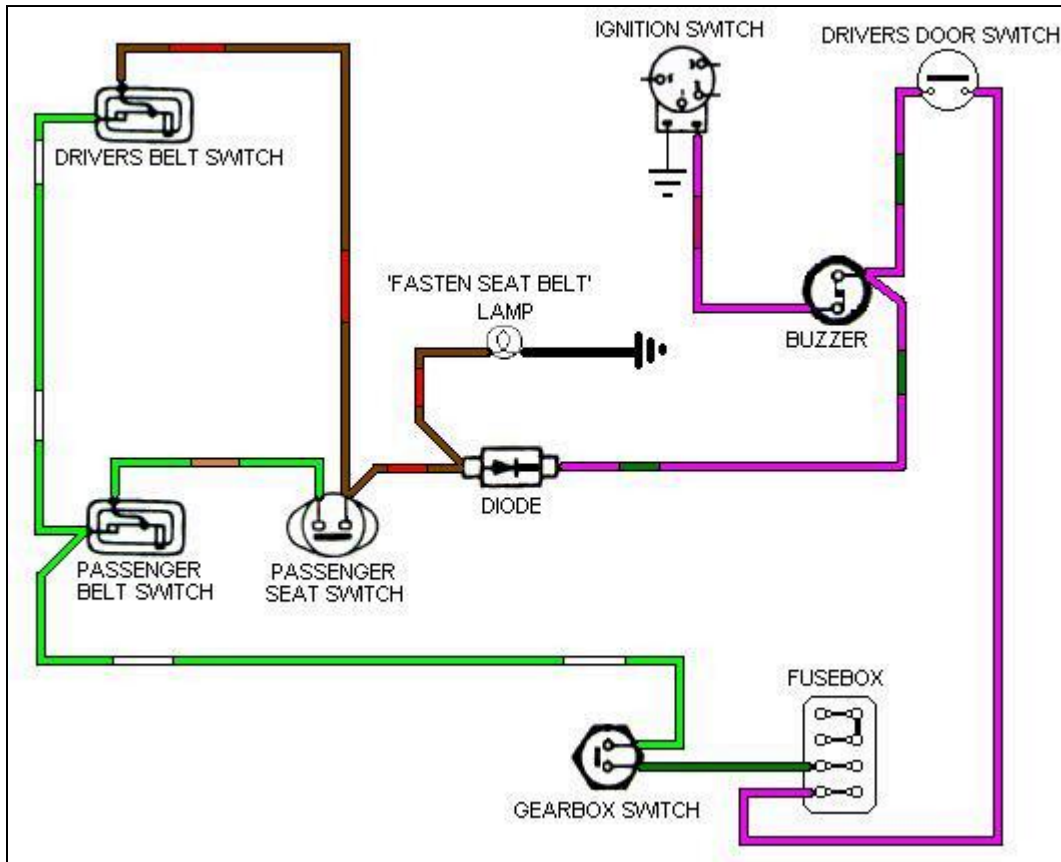
Note: For a few months from late 76 to Feb 77 the original gearbox Overdrive switch operating in 3rd and 4th was used plus an additional TCSA (Transmission Controlled Spark Advance) microswitch operating in Reverse, 2nd and 4th. Wiring these two switches in series allowed the TCSA i.e. vacuum advance to be enabled in 4th gear only whilst Overdrive was still available in both 3rd and 4th. In Feb 77 (Clausager, although the 1978 model year Repair Operation manual still shows the additional switch), possibly due to unreliability or cost considerations, the microswitch was deleted and the Overdrive switch arrangements changed to operate in 4th gear only, feeding both the TCSA and Overdrive. With this arrangement the output of the gearbox

switch fed both the Overdrive manual switch and the TCSA solenoid directly, so OD was only available in 4th gear.

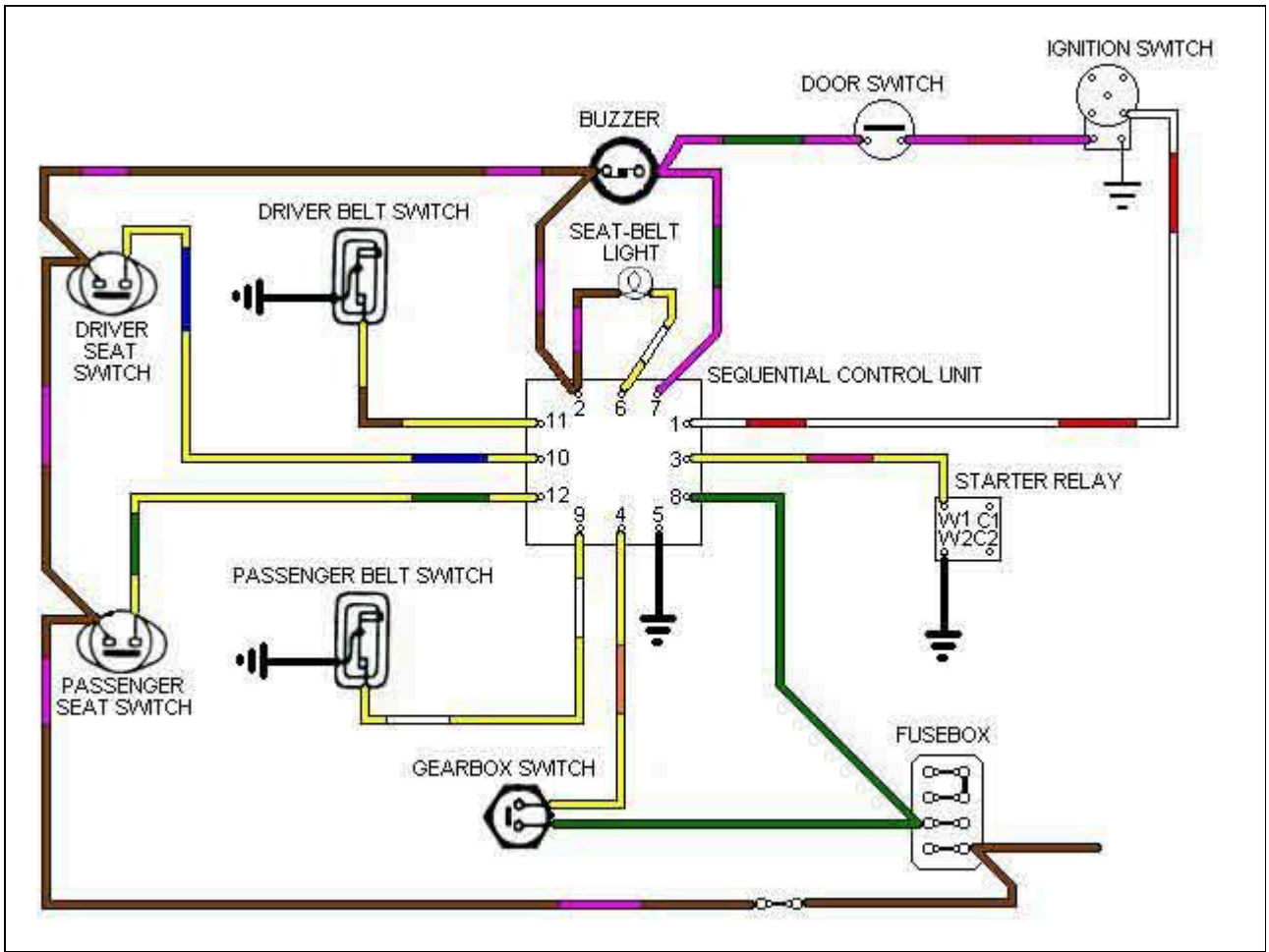
A fuse inserted at 'A' will protect both the OD and the TCSA circuits. There is also position 'B' where a single fuse will protect the OD, TCSA and fuel pump. But a fault in the OD or TCSA wiring will also cut off the fuel pump, so it is probably better to use two fuses - one at 'A' and one at 'C'.

Seat-belt Warning Systems

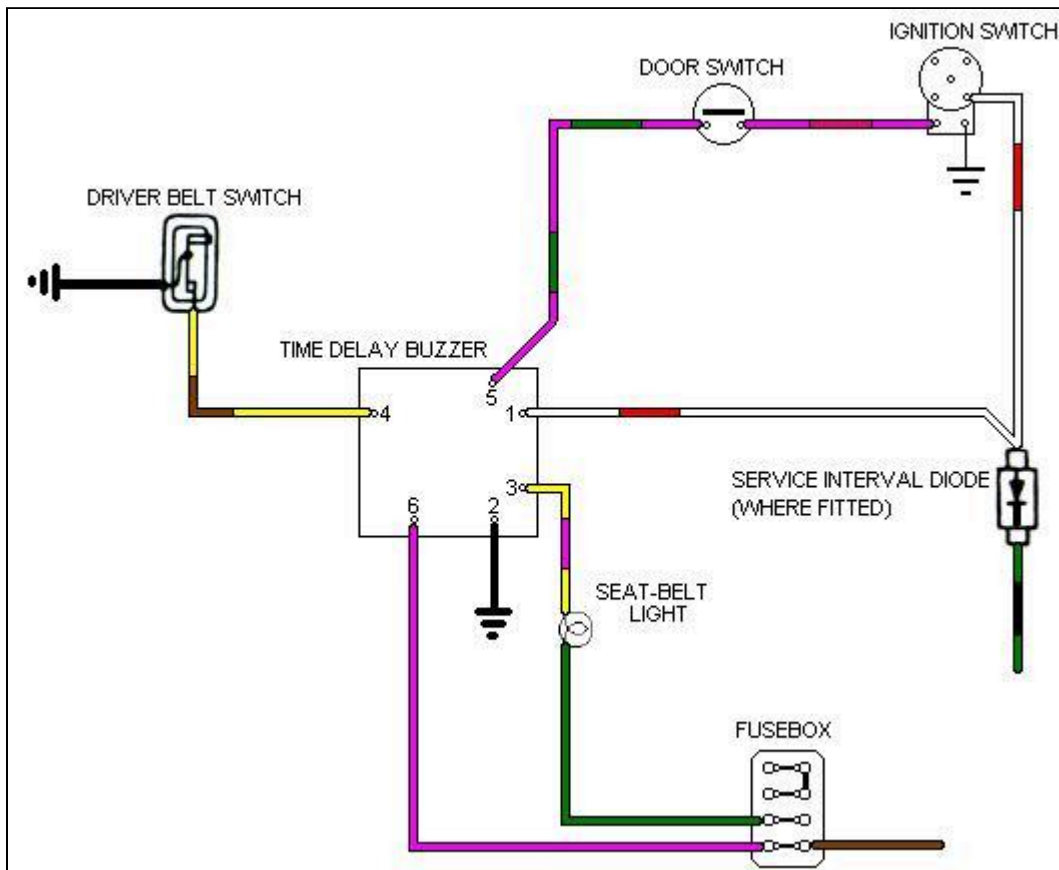
North America 1972-73:



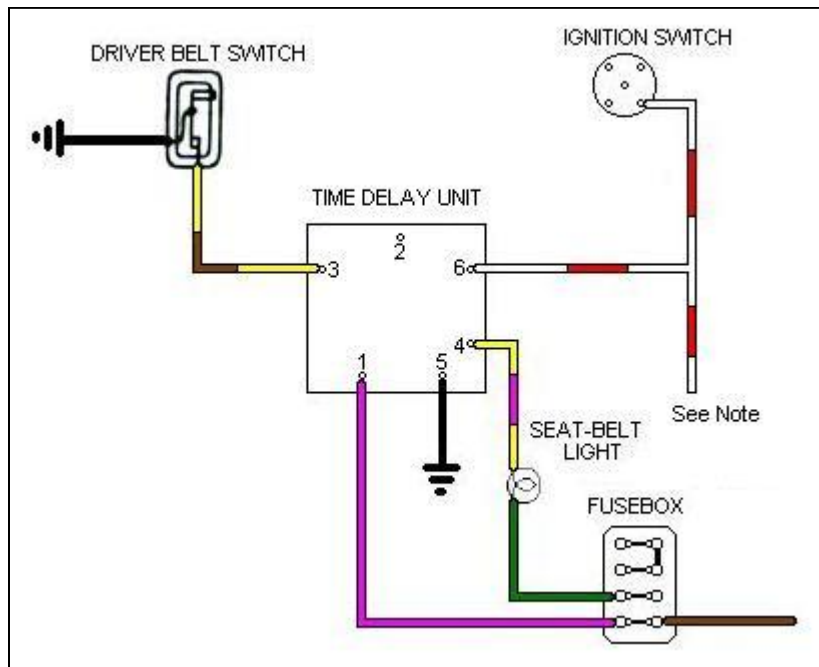
North America 1974:



North America 1975-on:

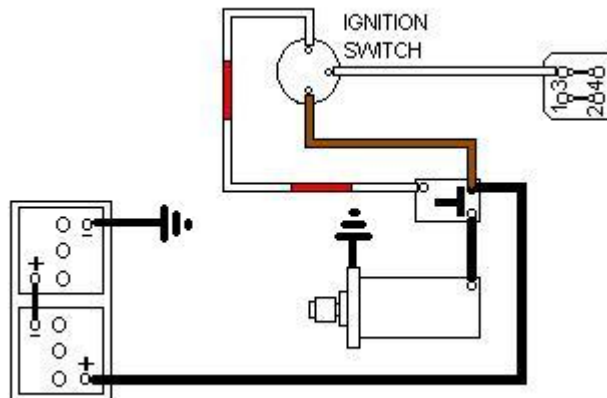


UK 1977-on:

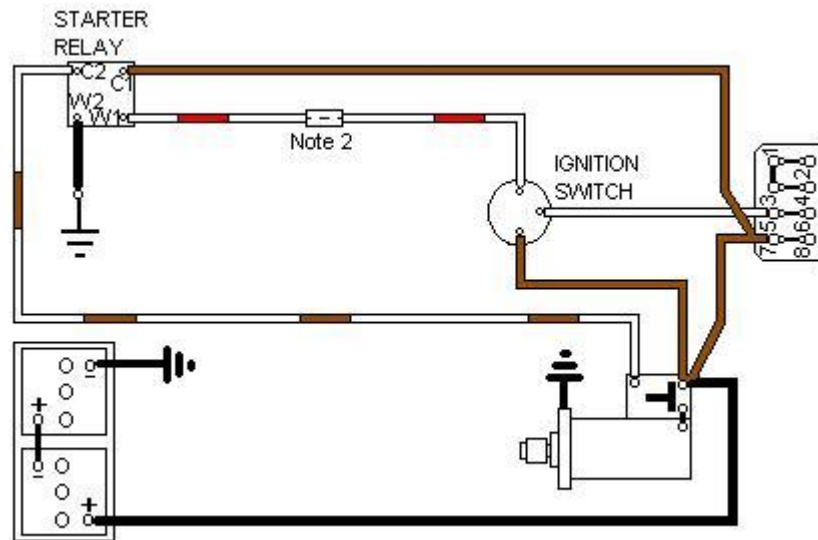


Starter Systems

Inertia Starter (remote solenoid, to 67)

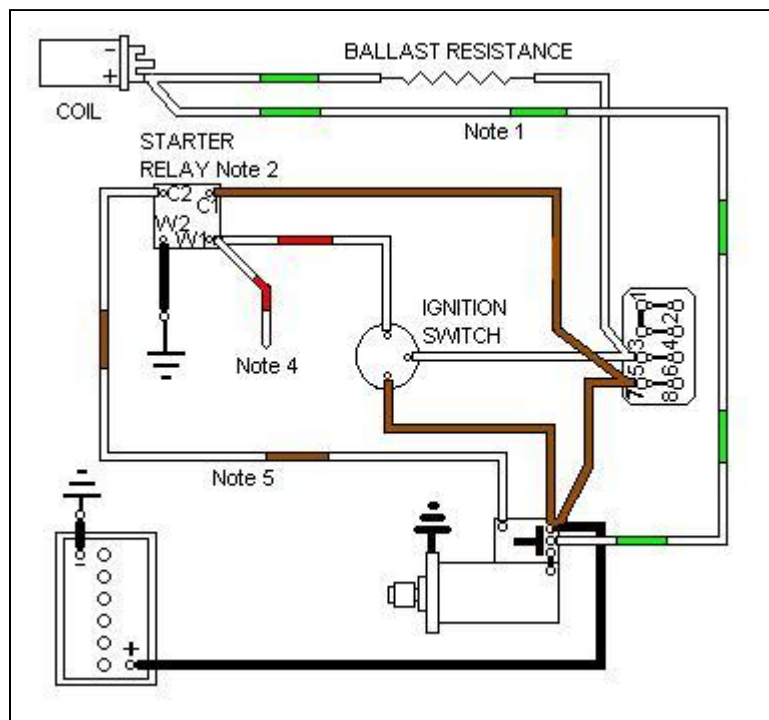


Pre-engaged Starter (attached solenoid), 12v Coil (chrome bumper 68-on, not V8)



Note 1: 1968 and 1969 cars had the pre-engaged starter but no starter relay, the White/Red went direct to the solenoid.

Pre-engaged Starter (attached solenoid) 6v Coil (rubber bumper and all V8)



Note 1: Factory V8s have the battery cable terminating at a [toe-board stud on the RHS](#) then a short length of cable from there to the starter, the brown wires also go up from this stud. The wire from the starter solenoid to the coil is white/light-blue, the wire from the harness ballast to the coil is still in white/light-green. The solenoid operate and coil boost wires have a 2-pin connector by the toe-board stud.

Note 2: The Leyland schematic for UK model in 1979 shows this wire as white/red, as is the wire from the ignition switch to the starter relay. That may be an error, but if not it will be a heavy gauge wire whereas the others at the relay are standard gauge so the three wires can still be identified even if the spade terminals have been cut off for any reason.

Note 3: Also on 77 and later models the starter is used to test-illuminate the [brake-balance and 'handbrake on'](#), and [seat belt](#) warning lights. The brake test illumination is via a diode and if this diode goes short-circuit it can cause the [starter to crank continuously](#) as soon as the ignition is turned on, and continues to do so even when the ignition is turned off, unless the handbrake is released.

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