

ANNUAL CHECKLIST

WHILE THE CAR IS ON THE GROUND:

1. Check cooling system: radiator cap should be replaced to prevent excessive pressure build up which will cause the radiator top tank to bulge. Hoses and belt should be checked for cracks. Always carry a spare lower radiator hose in your boot, and don't forget to check the strength of your antifreeze. Make sure the belt tension is correct or else you'll cause premature death to your water pump and generator bearings.
2. Top up steering and idler boxes.
3. Check fluid in carb dash pots (engine oil will do), lubricate carb linkages and cables.
4. Check brake fluid reservoir. Fluid should reach the top of the inner can. If it is low, look for leaks and make necessary repairs. Outer portion feeds the brake system, inner portion feeds the clutch.
5. Check all your ignition wires.
6. Check the front shock bolts to make sure they are tight. They hold your front end together so make sure these are snug!
7. Make sure your battery is securely fastened. Clean the posts.

IF ALL IS WELL, GO FOR A TEST DRIVE, LISTEN FOR CLUNKS AND SQUEAKS. ONCE THE CAR IS WARMED UP, YOU ARE READY FOR THE OIL CHANGE AND THE REST OF THE SAFETY CHECK.

1. Jack the car up properly. Do not use hollow front and rear member as jacking points! Make sure you have strong jack stands-don't use the cheap, flimsy ones unless your life insurance is paid up and we are your beneficiaries.
2. Check your rubber bushings of the sway bar, check for cracks where the A-arm attaches to the chassis and also check for cracks where the engine mounts attach to the chassis.
3. Look for signs of rust, there are lots of good chemicals out there to slow down rust. Untreated, rust can accelerate quickly and you're then looking at a substantial structural repair bill.
4. Clean out the area behind the door and in the rear fender wheel well.

5. Lubricate everywhere there is a grease fitting.
6. Check and change if necessary, not only your transmission/ overdrive oil, and the differential oil.
7. Check your brake hoses. If they are 30-40 years old, you should consider replacing the rubber hoses.

Always a good idea to stamp down on your brakes and look for leaks. The steel lines can rust.

8. Check the rubber bushings that are holding the transmission in place. They'll help to keep your transmission and engine from rocking forward.
9. Check your hubs and wheels and grease them. Remember worn out splines on either the hub or the wheel can cause you to lose a wheel while driving. To check front wheels: have someone apply the brakes, then rock the wheels from side to side; for the rear, apply the hand brake and rock the wheel. There should be no slop when you rock the wheels.
10. Don't forget to check the brake pads - if worn, replace them.
11. Spin the front wheels and listen for bearing noise. Replace noisy bearings. Grab the bottom of the front wheel move it in and out, if there is any movement, it can indicate wear on the king pin/ wheel bearing. Pump grease into the bottom king pin grease fitting, if the movement persists, it means a wheel bearing problem - either worn out or not shimmed properly.
12. You can also take this opportunity to adjust your steering, although this takes a BSF wrench which can be difficult to find.

*Supplied by: Healey Surgeons Inc.,
7211, Carroll Avenue,
Takoma Park,
MD 20912
U.S.A.
Phone:301 270 8811
Fax:301 270 8812
'28 years experience in healeying'*

BODYWORK & TRIM

1. Anodised Aluminium Trim

If the anodising is now a little dull and you prefer the shinier finish of polishing an easy way to remove the old anodising is to use a proprietary oven cleaner. Spray , leave for 15 minutes or so and wash clean. It is safer to remove the part from the car first as the cleaner will ruin paintwork and trim.

2. Stripping for Restoration

If at all possible when rebuilding, work on one side at a time. This way you will have an untouched side to see how the panels fit and take appropriate measurements. When stripping a car for restoration be as methodical as you can making as many notes as possible as to how things locate and take lots of measurements. It is tempting to think that you will remember how the parts go back together when you are disassembling them...believe me after several weeks or months You Won't!

3. Fitting Wings

This is probably the most difficult task when rebuilding the outer body and to achieve a good result **MUST** be tackled in the correct manner. Always start at the door and line up the panel so that the swage line matches and the door gap is correct. When this is secured proceed to fit the wing along the top edge to the shroud. On reaching the front or back (as the case may be) it should be possible to pull/push the shroud to meet the wing. If the depth of the wing or the curvature does not seem correct, place a jack under the lower edge and gently force the panel into shape.

4. Fitting Seat Covers

To ease the fitting of seat covers, first wrap the seat foams tightly in thin polythene and the covers will then slide easily over the foams making adjustment considerably easier.

5. Restoration*

When carrying out a full restoration we would recommend fitting the engine and gearbox into position before fitting the outer bodywork. These units weigh several hundred pounds and as a result the chassis bends slightly. The chassis flexing is enough to ruin perfectly set up door gaps and in some cases the door gap to rear wing closes completely.



Supplied by:

J.M.E. Healey.
4a. Wise Terrace,
Leamington Spa,
Warwickshire,
CV31 3AS.
England.
Phone:01926 425038

BRAKES & WHEELS

1. Worn Splines

If the splines on your hubs and wheels are very badly worn a temporary cure is to wrap a thin piece of tin foil around the hub splines before forcing the wheel back on.

2. Hub Nuts*

Always tighten rear hub nuts with a torque wrench to 600lbs in (6.91 kg m).

The fitting of new hub nuts with Loctite is recommended every time the hubs are removed, and check regularly for tightness.

3. Brakes*

1. Change brake fluid every 2 years.
2. Replace flexible brake hoses every 3 years.

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COOLING

1. Fan Belt

Always ensure that the fan belt is adjusted to the correct tension as given in the Workshop Manual (1" lateral movement for both big Healeys & Sprites) because overtightening can result in the premature failure of both the Water Pump bearings and also those in the Dynamo.

ELECTRICAL

1. Blinking Bulbs

Take care to really clean those lamp contacts and smear the inside of the holders with petroleum jelly. This should ensure a good electrical contact and keep out the wet.

ENGINE & TRANSMISSION

1. Access to Engine

To improve access to the engine compartment by opening the bonnet wider, tie some strong cord to the bonnet and secure it tightly to the boot lid handle.

WARNING - make sure that you lock the boot to prevent any comic opening the boot while your head is under the bonnet!!!!

2. Cylinder Head Removal

To loosen a cylinder head prior to removal, first remove all the head nuts (remembering to loosen in the correct order) and then with the spark plugs still in place but **NOT** connected, operate the starter briefly a couple of times. The head should now be easy to remove.

3. Seized Clutch

Freeing a seized clutch is a problem with which most of us are faced at some time or another. Prevention is better than cure so when you tuck up your car for the winter remember to insert a suitable piece of wood (cushioned at end) between the depressed clutch pedal and the steering wheel. Assuming that you have not had the foresight to do this and the clutch is firmly seized you have

several options depending on the firmness with which it is stuck. It is always a good idea to start the car and let the engine reach operating temperature , the heat will then spread back to the clutch , hopefully making your job easier. Switch off the engine and select first gear or reverse. Make absolutely sure that there are **no** obstructions either in front or behind and operate the starter in short, sharp bursts. Alternatively, you can jack the back up so that the rear wheels are off the ground. With the brakes off and the clutch depressed start the engine and run at approximately 1500 rpm in a high gear. Then apply the brakes GENTLY and NOT for a sustained period. This should free all but the most reluctant clutch. The last resort, and one that should not be undertaken lightly for fear of causing expensive damage to other components is to follow the above instructions but instead of applying the brakes get a helper to lower the jack by opening the hydraulic valve. Be prepared to stop the car immediately and give yourself plenty of space!!

4. Oil Problems

One of the engine problems with the 6 cyl. is that it is prone to pump too much oil into the rocker cover. It was therefore common practice to blank off the top oil hole on alternate rocker arms to reduce the flow. Don't be concerned there is still plenty of lubrication for the rocker gear.

5. Overdrive Solenoid *

CAUTION: incorrect adjustment can cause major transmission and overdrive damage by having the solenoid come on when it shouldn't be. Also, you'll risk cooking the solenoid.

All solenoids' should be tested before fitting into the car. A good solenoid will almost jump in your hand when energised. Cleaning points or checking alignment of points often will get a solenoid going again. While the cap is off, check to see if the points to the primary winding open up when the plunger is at the top of the stroke.

How to set the adjustment

On late model overdrive units there is an adjustment to the limit the overall travel of pinch bolt lever operated by the solenoid plunger. On earlier models, you can install a 10/32 machine screw in the hole below the solenoid. Use a nut both above and below the hole to keep the screw in place.

The adjustment setting seems to work best at 3/16" to 7/32".



You would want half of the travel to be free and the other half of travel to lift the spring loaded ball. You should be able to feel the resistance in the transition between free play and when the ball starts to lift (at the half way point).

Check to see if at the "on " position, the adjust lever can still be lifted slightly, this will ensure the primary points are opened and the secondary winding is holding the plunger. You can double check your adjustment by using the factory manual method and it should be very close.

The method outlined above takes into account wear on the components and address the overall lift of the plunger.

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FUEL

1. Unleaded Fuel *

As the phasing out of 4-star fuel approaches all Austin Healey engines can be modified to run on unleaded fuel by fitting hardened valve seats and new valve guides or, alternatively, a new aluminium head can be fitted.

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4a. Wise Terrace,

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GENERAL

WINTER STORAGE: *

1. Steam clean under body and recoat with a superior modern cavity wax material.
2. Store your Austin Healey on blocks to unload suspension.
3. Deflate tyres.
4. Check antifreeze.
5. Disconnect battery and trickle charge regularly.
6. Petrol deteriorates - preferably drain the tank, or alternatively top up the tank when the car is required.
7. Store the car with the handbrake off.
8. Start the engine and warm up regularly if possible.
9. Spray engine bay with DW40, or similar to prevent corrosion occurring on plated fittings.
10. Cover car with a soft absorbent cover.

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1. Car Ramps

A useful tip to prevent the ramps slipping away from the car when attempting to drive the car up them is to cut a strip of old carpet slightly narrower than the ramps and approximately 5 feet long. Fold the carpet around the bottom rung on the ramps and pull back approximately half the length. This will secure the position of the ramps as the car is driven at them.

2. Economy Rust Remover

Soak the parts for several days in vinegar and then give them a good wire brushing.

3. Using your Jack

Insert a fairly substantial and as long as practicable, piece of wood between the jack and the chassis section. This will prevent any damage to the frame.

4. Routing cables through the dashboard

An easy way of ensuring that replacement cables are routed in the correct manner is to disconnect the cable on the engine side and join a strong piece of cord to the end. Pull out the cable from the dashboard side pulling the cord with it. The replacement cable can then be attached and pulled into the engine compartment by the cord. Don't forget to ensure that the securing nut is the correct side of the dashboard before pulling through the cable.

5. Lubrication*

Lubricate rear springs with 50/50 paraffin and oil.

100/4 Owners - regularly lubricate the pedal cross shaft, which is often overlooked. If it seizes up the brakes will come on when you press the clutch pedal!

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STEERING & SUSPENSION

1. Rear Shock Absorber Links

When replacing these on all cars up to the late Mk 3 3000 ensure that they are fitted above the shock absorber arm and not below as is customary. It is quite possible to assemble them incorrectly but the effect is that the shock absorber arm is almost at the end of its travel in the static position, so that even a small amount of movement will result in breakage.

2. Front Wheel Bearing*

Start by putting the new races for the liner and outer bearings in the freezer to make it easier to install.

Install the races.

Put 90 weight oil on your inner bearing and offer it up to the spindle. The oil will provide protection from damage due to bearing running dry but at the same time, not give you a false reading when trying to shim the bearings.

Next goes the bearing spacer, then the shims, starting with the thickest one .030, then .010, .050, .030, (one of each). Offer up the front hub, without the seal. Again, bathe the outer bearing in oil. Line up the tab of the washer with the groove in the spindle and tighten the castle nut, so everything lines up.

If it drags when you tighten the castle nut, then you need to add shims. If it is too loose, you need to remove the shims, When it is correct, re-tighten to the correct specs. At this point, the hub should be turning freely, with no end float and no pre-load.

Once you are satisfied that you have the bearings set up correctly, then remove everything. Make sure you keep track of the shims! Now pack the wheel bearings with wheel bearing grease and install your front seal and reassemble unit.



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