TRIP CHECKLIST

A. If your car has any known mechanical problems, fix them.

B. Inspection:

One month (minimum) prior to departure, perform the following complete mechanical check-over, and write down the results:
(This checklist is intended to be applied to an Austin-Healey which is currently in frequent use with no known problems or things that need to be fixed.)
Jack up front and rear of car and put on wheelstands.

1. Check fluid levels:
   - Rear axle oil
   - Gearbox oil
   - Engine oil
   - Radiator coolant
   - Brake and clutch fluid
   - Windshield washer fluid
   - Steering box and idler oil.
2. Check windshield wiper blades for rubber deterioration.
3. Check windshield wiper arms for adequate pressure on windshield and correct sweep area.
4. Check all exterior and instrument light bulbs.
5. Check aim of headlights.
6. Check both horns working.
7. Underneath the car, check for signs of fluid leaks from fuel tank and lines, engine, gearbox, differential pinion seal, clutch slave cylinder, engine frost plugs (rust streaks), water pump, radiator, and lower rad hose.
8. Remove all wheels.
   - Check for loose or broken spokes.
   - Clean wheels.
   - Clean out wheel splines and hub splines to bare metal with solvent and stiff brush and inspect for wear.
   - Note whether splines are squared off (correct), sharp, or rounded.
9. Check special nuts securing rear spline hubs. Note any that can be turned down all the way by hand.
10. Remove brake drums and disc pads and check lining thicknesses.
    - Linings should be at least 1/8" thick and dry.
    - Check wheel cylinders for signs of wetness.
11. Check beneath rear hubs inside backplates for signs of wetness (indicating rear hub seal leaks).

    Note - while rear drums are removed, protect brake shoes from possible oil drips from axle shaft flange.

12. Back off slightly, then torque front shock absorber mounting bolts to 45 lb-ft.
    (Better yet, remove one bolt at a time, install new lock washers, then torque as stated.)
13. Remove bolts securing rear shock absorbers to frame.
    Check roundness of holes in shocks and on frame brackets.
    Check for impression of bolt head in shock absorber.
14. Check rear springs carefully for broken leaves or loose or missing clips.
15. Snug up U-bolt nuts. On BJ-8s, do not over-tighten or the plate will deform.
16. Check for tightness of nuts on rear spring forward mounting pins.
    Torque to a minimum of 30 lb-ft.
17. Check condition of anti-rollbar and Panhard rod rubber bushings.
    Check that anti-rollbar frame brackets are not flattened.
18. Temporarily install front wheels.
    Jack one side at a time under spring pan to approximate normal suspension position and check for wear in king pin lower bush, lower trunnion, and steering linkage.
    Grasp tire at top and bottom and attempt to rock it in and out while a helper observes the lower trunnion area.
    Grasp tire at front and rear and rock side to side in both directions while helper watches steering linkage joints.
    Noticeable play in both directions without obvious cause indicates loose or damaged wheel bearings.
19. With front pads or drums removed, check for play in front wheel bearings, or resistance to turning. The front hubs should turn freely but with no play in the bearings.
20. Check that front brake pads are evenly worn.
21. Check fan belt for proper tension and inspect for frayed edges or splits.
22. Tighten all hose clamps, especially the hard-to-get-at ones on the heater under the dash!
23. Check around heater valve for signs of leaks.
24. Move steering wheel back and forth and listen for clunking noises.
    Check for wetness below steering box and steering idler.
25. Check driveshaft U-joints. There should be no perceivable play at all.
    This completes your check, and you now have a list of items which will need attention before your departure to ensure a safe and trouble-free trip.

C. Remedies and Maintenance Items (Refer to checklist prepared in Section B.)

1. Adjust rear axle oil level (ensure not overfull).
2. Drain gearbox and overdrive, clean filter screen, and refill with correct oil. Overfill by 1/2 litre.
3. Drain engine oil, change filter, clean out filter housing, make sure all parts which are meant to be there are, in fact, there. Install new oil filter and refill engine

with oil. Make sure you replace the sealing ring to the filter head and that it is correctly seated in its groove.

4. Top up the brake and clutch fluid to within 1/2" of the reservoir top. It tends to siphon out if higher. If the existing fluid is black and sparkly, change it by pumping out through the left rear wheel bleed nipple, refill with fresh fluid, then bleed all four wheels as usual. Repeat for clutch fluid. Brake fluid should be changed every two years.
5. Top up washer fluid, set jets to hit windshield just below the top. Fix any leaks.
6. Check antifreeze content in radiator. A mix of 50/50 to water is best for hot weather or cold. If in doubt, drain and refill. Use one whole 4 litre jug of antifreeze, then top with water, preferably distilled. Test the pressure cap or, if in doubt, replace it. Make sure it has the correct depth of plunger (should be 1"). Check for swollen, cracked, or very soft radiator or heater hoses. Change any that are bad or suspect. Check that your engine block drain tap is not leaking (under exhaust manifold). Replace heater valve if leaking. Correctly tighten or replace fan belt.
7. Replace any wiper blades that are less than perfect or over one year old.
8. Change any bad bulbs and set headlights to aim straight ahead and parallel on high beam. Set other lights as required.
9. Replace defective horns or adjust, if possible (first check for blown fuse).
10. Rectify any leaks discovered, especially from engine frost plugs, water pump, rear hub seals, or hydraulics. Any other leaks may be lived with, provided adequate topping up is done during the trip.
11. Replace spokes, wheels, and hub splines as required.
    Also make sure tyres are in good condition and a matched set.
    Set pressures to between 20-25 psi front and 23-28 psi rear. The best pressure will depend on your individual type of tyre and how much load you are carrying. The shock absorbers will not work properly with tyres any harder than this.
    Have wheels balanced.
12. Rear shock absorber bolt holes must be round. If the shocks have worn holes, replace them. Worn mounting holes in the frame must be welded up and redrilled.
    Also weld up any cracks that may exist where the shock mounting plates are welded to the frame rails.
    If possible, install washers under bolt heads, install bolts with head on shock absorber side, and secure with new lock washers and lock nuts.
    Tighten securely. If holes in frame or shock body are oval, the shock will move and not function correctly, regardless of how tight the bolts are.
13. Replace any loose or missing rear spring clips.
    If any spring leaves are broken, replace the leaf or the spring on both sides of the car.
14. Straighten anti-roll bar frame brackets and replace rubber bushes as required.
15. Replace and/or rebush king pins as required. Adjust vertical play to absolute minimum.

16. Remove, clean, and repack front wheel bearings. Refit and install new hub seal, and adjust to no-drag with no, or just barely perceptible, end-float.
17. Top up steering box and idler with differential oil if necessary. 80/140 is best. If clunking is audible when moving the wheel back and forth, adjust idler vertical play. If too much play in straight ahead position of steering, adjust steering box, but not so much as to cause a tight spot.
18. Replace universal joints as required. Lubricate both joints and shaft sliding spline with grease gun.
19. Lubricate all grease nipples - consult your manual for locations. There are 8 - 10 on a BJ8 and up to 21 on BN1s and BN2s. Other models fall in between. Apply a thin coat of grease to all hub and wheel splines and knock-off threads.
20. Replace brake pads or shoes as required. Replace in axle sets only. Adjust brakes.
21. Do major tune-up, including valve adjustment. Fit carb kits if required. Clean or replace fuel filters, including in fuel pump if so fitted. Clean and oil air cleaners.
22. Test drive locally for one week. If battery is more than four years old or of unknown age, replace it. Use Interstate or Sears brands. Now you should be ready.

D. Departure and Enroute Checks on departure day and each day of travelling, check before leaving:

1. All fluid levels. Engine oil should be checked with the car on a level surface and only after refilling tank with gas to ensure consistency in reading. Don't forget to check gearbox oil.
2. Check the ground where car was parked overnight for fresh puddles of fluid or more than the usual drip spots.
3. Check tyre pressures cold before moving the car. Make a note and adjust, if necessary, at the next fill-up. Allow 2-3 psi extra for warm tyres, if driving for more than 1/2 hour, or if sitting in direct sunlight.
4. Give knock-offs a couple of good whacks to ensure security.

E. Suggested Traveling Kit:

Usual jack, knock-off hammer, etc., plus:
a) Short distance - under 500 miles
One litre engine oil
Fuel additive (if used)
Combination wrench to fit oil filter bolt
Feeler gauge and screwdriver to reset ignition points
7/16" wrench to reset distributor timing and tighten fluid pipe nuts
Screwdriver and/or wrench to adjust carburettor mixture and idle 1/2" wrench (short) to remove air cleaners 3/8" drive ratchet, extension, and spark plug socket
Phillips screwdriver to fit condenser screw
Good pair of pliers

Wire and wire cutters
Electrical tape and some 3M connectors
One spark plug, set of points, condenser, rotor
Flashlight with spare set of batteries
Coveralls
Ground sheet
Workshop manual

b) Longer distance (500 - 3,000 miles) - Add to above short distance kit:

Small oil pump can with flexible spout containing engine oil
One extra litre of engine oil
Fuel pump and tools required to change it
Water pump and tools required to change it
Lower radiator hose
Overdrive solenoid and tools required to change and adjust it

c) Long distance (over 3,000 miles) - Add to above kits:

Tools required to adjust brakes
Oil filter(s)
Wrench for engine oil drain plug
Grease gun
Valve cover gasket, putty knife, tools to adjust valves
Brake fluid<
Fan belt and tools required to change it

General Notes:
1. Plan your fuel stops in advance, every 150 miles maximum, until you know that you can go further.
2. Use self-service gas stations (where available). Attendants at full-service outlets have been known to put oil where the water goes, etc., and will (almost) always spill fuel on your paintwork. Also, you will have a better feeling for what's happening with your car and you will worry less.

Happy Healeying.