



NAME:
DATE:

YEAR/MODEL:
MILEAGE:
DOM:

PRE-BUYER INSPECTION CHECK LIST

E31; E32 & E34 w/M50, M60, or M70 motor; E36/Z3; E38; E39; E46; E52; E53; E60; E61; E63; E64; E65; E66; E83; E85; E90

Service Description	
<input type="checkbox"/> Road test car for initial driving impressions. Check for proper engine performance, handling characteristics and transmission engagement. Test brake system for proper ABS engagement and absence of pulling or shimmy. Check for road noises, suspension vibration, squeaks and rattles. Check basic operation of cruise control.	
<input type="checkbox"/> Perform complete electronic diagnostic systems test. Interrogate and read out any existing faults in DME (<i>digital motor electronics</i>), EGS (<i>electronic transmission control</i>), EWS (<i>electronic drive-away protection</i>), ABS/ASC/DSC (<i>Anti-lock braking system/all season traction/dynamic stability control</i>), ZKE (<i>central body electronics</i>), IKE/KOM (<i>instrument cluster</i>), IHKA (<i>automatic heating and air conditioning</i>) and SRS/MRS (<i>airbag/multiple restraint system</i>).	
<input type="checkbox"/> Perform body and rust perforation inspection.	
<input type="checkbox"/> Perform preliminary inspection of under-carriage for signs of flooding (i.e. debris trapped on top of fuel tank, carpet removal or displaced body plugs).	
<input type="checkbox"/> Inspect engine seals and gaskets for oil seepage.	
<input type="checkbox"/> Inspect transmission seals and gaskets for seepage (automatic and manual); clean and determine source of leaks as needed.	
<input type="checkbox"/> Inspect transfer case for seal leakage (E46 XI, E53 X5, E83 X3 only).	
<input type="checkbox"/> Inspect rear driveshaft u-joints/c.v. joints for wear.	
<input type="checkbox"/> Inspect condition of rear driveshaft center bearing for sagging and correct preload.	
<input type="checkbox"/> Inspect condition of forward driveshaft including drive flanges and fasteners (E46 XI, E53 X5, E83 X3 only).	
<input type="checkbox"/> Examine condition of rear axle mount. Note: Z3, MCoupe - inspect for signs of cracking in differential mounting at body cross frame support.	
<input type="checkbox"/> Examine rear axle shaft seals for gear oil seepage.	
<input type="checkbox"/> Examine rear stub axle seals for grease seepage.	
<input type="checkbox"/> Inspect condition of inner and outer c.v. joints and boots on rear half shafts. Report signs of cracking or seepage (grease).	
<input type="checkbox"/> Inspect front halfshaft inner and outer c.v. joints for wear and boots for cracking or leakage ((E46 XI, E53 X5, E83 X3 only).	
<input type="checkbox"/> Inspect condition of rear crossmember mounts for sagging or splitting.	
<input type="checkbox"/> Test upper and lower rear control arm joints and bushings for wear.	

- [] Test trailing arm pivot joints for wear. (E32, E34 only)
- [] Test condition of rear shocks for proper compression and rebound. Inspect for external leaks or internal leak down. Check condition of shock tower mounts.
Note: E36, Z3, MCOupe, E46 - Inspect body tower area for split rubber, cracking or metal fatigue.
- [] Test rear suspension link arms for play which may effect alignment settings.
- [] Examine front suspension for split seals, worn bushings and bent or damaged components which may effect handling and/or alignment.
- [] Check condition of front suspension/steering ball joints including sway bar linkage joints, thrust arms, control arms, tie rods and center link.
- [] Inspect steering shaft u-joint connection clamping bolts and steering gear mounting. Check for play in u-joints and condition of hardy disc.
- [] Measure front wheel bearings for play. If evident, check bearings for signs of water contamination.
- [] Measure lateral and radial runout in each wheel (Advise if rotation and balance is needed).
- [] Test operation of RDW system (*low tire pressure warning*) (if equipped).
- [] Check condition of tires and tread for uneven wear or punctures. (Advise if alignment is needed).
- [] Test operation of M-Mobility unit (E46 M3, MCOupe, E39 M5, Z8).
- [] Check for proper installation of jack/lug wrench and account for proper tools and supplies in tool kit (if equipped).
- [] Test condition of front shocks for proper compression and rebound. Inspect for external leaks or internal leak down. Check condition of shock tower mounts for split/collapsed rubber or worn/binding pivot bearing.
- [] Test springs for fatigue. Includes measure ride height.
Left front: _____ Right front: _____
Left rear: _____ Right rear: _____
- [] Check power steering fluid reservoir level and check fluid for burnt or poor condition. (Advise if flush is advised).
- [] Inspect power steering system hose clamps and fittings. Inspect for any leaking seal rings, hoses, pump, and steering gear.
- [] Inspect engine mounts and check condition of rubber for cracking or sagging.
- [] Inspect exhaust system bolts and sealing flanges, check condition, position and mounting of exhaust system; check rubber hangers for cracking or sagging.
- [] Visually inspect clutch master cylinder, slave cylinder, hoses and lines for leaks (manual).
- [] Check operation of shifting, inspect for wear in cables (automatic) or linkage (manual).
- [] Measure estimated remaining clutch life and advise if over 50% worn (manual or SMG).

- [] Test SMG function and adaptation with GT1 (if equipped).
- [] Check level of brake and clutch fluid in reservoir. Flush is advised every year in Houston due to the high humidity levels (Advise if flush is required).
- [] Examine brake lines/hoses and connections for seepage, damage, or distortion.
- [] Check parking brake for proper engagement.
- [] Visually inspect brake calipers for worn slider pins and/or split piston seals.
- [] Measure thickness of brake pads remaining:
Front: ____ mm (____% worn) Rear: ____ mm (____% worn)
- [] Measure thickness of brake rotors (if pads are worn more than 80%)
Front: ____ (____ Minimum spec) Rear: ____ (____) Minimum spec
- [] Examine engine belts for cracking. Inspect tensioning adjustment pulleys for wear and tensioner pistons for correct preload on belts.
- [] Visually inspect fuel tank, lines, and connections for seepage or under-carriage damage. Report hoses older than 7 years or visually cracking.
- [] Inspect fuel line connections at fuel pump and pick up units. Includes removal and installation of back seat and/or fuel pump access hatch. Report seepage around pick up unit/gasket.
- [] Inspect fuel line clamps under car and connections in engine compartment.
- [] Visually inspect injection rail, injectors and fuel pressure regulator for seepage.
- [] Inspect condition of vacuum hose to remote fuel pressure regulator.
- [] Inspect engine cooling system aluminum flanges under hose connections for signs of corrosion or hose damage. (Advise if removal and repair of hoses is required).
- [] Check all engine cooling system plastic hose connections and flanges for signs of seepage due to embrittlement. Advise of age and condition of parts for future attention as needed.
- [] Pressure test engine cooling system and all connections and inspect for seepage. concentration.
- [] Test efficiency of engine cooling system including test radiator heat dissipation, thermostat operation and proper flow through system. Flush is required every three years to prevent corrosion damage. (Advise if flush if required).
- [] Test engine fan clutch for proper operating engagement (at approximately 90 °C.) to provide adequate air flow through radiator. Test for disengagement at higher RPM to prevent excessive drag on engine.
- [] Test auxiliary fan with engine at operating temperature at idle for proper operation of normal and high speeds. Includes bypass temperature switch to simulate overheat situation and engage air conditioning system to test auxiliary fan response based on system pressures.
- [] Check battery terminals and battery posts for corrosion.
- [] Visually inspect battery condition and fitment. Verify vent tube function.

- [] Perform electrical system /load tests.
Alternator: amp ___ V ___ Starter: amp ___ V ___ Battery V ___ sec. ___
- [] Check operation of windshield washer system (front and rear if equipped). Includes inspect reservoir and hoses for leaks and nozzles for proper spray pattern and position.
- [] Check wiper blades (front and rear if equipped) for proper cleaning and condition.
- [] Check for signs of oil seepage into spark plug holes around valve cover gaskets.
- [] Check engine compression at operating temperature with wide open throttle (fuel and ignition systems disabled).
#1: ___ #2: ___ #3: ___ #4: ___ #5: ___ #6: ___
#7: ___ #8: ___ #9: ___ #10: ___ #11: ___ #12: ___
- [] Test function of vanos system (93 and newer) and assess engine timing chains for wear.
- [] Electronically test synchronization of MDK unit and throttle sensor (99 and newer).
- [] Inspect intake boot, engine breather hoses and crankcase breather system for proper sealing or signs of cracking, splitting or brittle plastic components.
- [] Inspect air filter(s) and fuel filters(s) for clogging/age. (Advise if replacement is needed).
- [] Verify proper secondary air injection system function including inspect vacuum and pressure hoses for cracking or leakage. Test operation of air limit valve for signs of sticking (due to carbon build up).
- [] Electronically test function of oxygen sensors including pre-catalytic converter and post catalytic converter sensor operation.
- [] Scope engine including read out live engine data for nominal specs and adaptive fuel trim.
- [] Test fuel evaporation control system for proper operation and saturation levels.
- [] Measure fuel injection system emission output at tail pipe(s):
Bank 1: CO% ___ HCppm ___ CO2% ___ O2 ___ NOX ___ AF Ratio ___
Bank 2: CO% ___ HCppm ___ CO2% ___ O2 ___ NOX ___ AF Ratio ___
- [] Check operation of lighting equipment including headlights, foglights, turn signals, taillights, side marker lights, and parking lights.
- [] Check stalk control for proper turn signal and headlight flash.
- [] Test operation of ALC (*automatic light control system* - 9/01 and newer) (if equipped).
- [] Check operation of both horns.
- [] Check headlight function, aiming tension rods and proper adjustment.
- [] Check instrument cluster and dash illumination.
- [] Test operation and illumination of all standard dash warning systems and check control system.

- [] Test function of OBC (*on-board computer*) including stalk controls.
- [] Test operation of MFL (*multi-function steering wheel*) controls.
- [] Test operation of PDC system (*park distance control*) (if equipped).
- [] Perform navigation system function test (if equipped).
- [] Check operation of interior dome, glove box, map, flashlight, rear reading, vanity mirrors and luggage compartment lights.
- [] Check function of cup holders (if equipped).
- [] Test operation of windshield wipers (rear if equipped), heater and air conditioner blowers and controls, and rear window defroster. Check stalk control, sliders, switches and vents for proper operation.
- [] Inspect all weatherstripping for tears and proper door/window contact.
- [] Check operation of sunroof including height adjustment, cable timing and one-touch feature.
- [] Inspect paint and finish quality. Measure thickness of paint if body work is suspected.
- [] Check doors, hood and trunk for proper closing tension and check function of internal and external release mechanisms for faulty operation.
- [] Check fitment of doors, hood and trunk. Measure gaps for fitment issues or possible previous body work.
- [] Operate and test function of locking system. Check function of all interlocking actuators in doors, trunk, fuel filler door and check for third position dead bolt operation.
- [] Test function of DWA (*alarm system*).
- [] Test operation of electric and manual seat adjustments including test operation of seat memory feature (if equipped). Advise if seat material repair or conditioner is needed.
- [] Check operation of seat heater (if equipped).
- [] Examine condition and operation of seatbelts.
- [] Check headliner and partial shelf material for sagging and for secure mountings of A,B & C pillar trim.
- [] Visually inspect SRS/MRS air bag units for worn covers or damaged trim.
- [] Check operation of electric mirrors including check motors for binding or popping. Test function of passenger side reverse drop down feature (if equipped) and mirror memory function (if equipped).
- [] Check operation of manual and electric windows. Report any window regulator abnormal function or noises.
- [] Check operation of side and rear window shades (if equipped).
- [] Inspect external microfilters and check for debris in cowl.

- Check internal IHKA microfilters for clogging (if equipped). Replacement advised every 3 years (invoiced separately).
- Check air conditioner charge and visually inspect all hose connections and components for signs of seepage.
- Inspect air conditioner hoses and compressor for proper mounting to prevent chafing or vibration.
- Test actual air conditioning system pressures during operating conditions.
High: _____ Low: _____ Ambient temperature: _____
- Test IHKA temperature output during operating conditions.
AC at idle: _____ AC at 55 mph: _____
Heat at idle: _____ Heat at 55 mph: _____
- Test audio function including radio, CD, cassette and speakers.