



RSA

PROPOSALS FOR CHANGES TO THE NCT IN 2010

Consultation Paper

Vehicle Standards & Enforcement
23 February 2009

Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

Consultation Document on the RSA proposal for changes to the National Car Test in 2010

Introduction

In accordance with EU Directive 96/96/EC, all EU Member States are required to have arrangements in place for the compulsory periodic roadworthiness testing of motor vehicles and trailers registered by them. Implementation of a system of roadworthiness testing of passenger cars in Ireland commenced on 4 January 2000 through the National Car Testing Service (NCTS).

During 2008, the Road Safety Authority (RSA), in consultation with its Technical Advisory Forum¹, reviewed the current car testing specification. Following on from that review, this Consultation Document sets out a number of new test items which are proposed to be introduced to the National Car Test in early 2010. This consultation also considers the introduction of annual testing for cars which are over 10 years old.

Your views

The RSA is seeking views on proposals to add new test items to the National Car Test in early 2010. On completion of this consultation process the RSA will be making proposals to the Department of Transport regarding the items to be included in the National Car Test from 2010.

The RSA believes that these changes will improve the safety of vehicles on our roads and assist in the achievement of our objective to bring Ireland's road safety record into line with "best practice" countries throughout the World.

This consultation document will be of interest to car owners and all those involved in the motor trade.

¹ *The Technical Advisory Forum was established in early 2008 to advise the RSA on all matters relating to vehicle standards and testing in Ireland. It includes industry representatives as well as SIMI (including Commercial Vehicle Testing Network), Local Authorities, NCT, An Garda Síochána and the Taxi Regulators Office.*

You have until Friday 27th March 2009 to respond, but it would help us, if you could give your views as soon as possible. Any examples or evidence supporting your views would be very helpful. We cannot guarantee that any responses received after this date will be considered.

Replies should be sent to:-

National Car Test Consultation

Road Safety Authority

Moy Valley Business Park

Primrose Hill

Ballina

Co. Mayo

or by email to nctconsultation@rsa.ie

Background

The Road Traffic (National Car Test) Regulations 2003 to 2008 set out the current items to be tested. The method of testing and the reasons for failure of the roadworthiness test are in accordance with the National Car Test (NCT) Manual.

The items currently subject to an NCT test are contained in Schedule 3 of The Road Traffic (National Car Test) Regulations, 2003, SI No. 405 of 2003 which is included in Appendix I to this Consultation document. The proposed new test or modified test items are included in red in the Appendix.

Proposal

The anticipated additional or modified test items are as follows:

(1) Glass Opacity Test

Excessively tinted windscreens or front side windows present a significant safety hazard for vehicle drivers and their occupants. Visibility is greatly reduced, particularly for night time driving and there are also enforcement issues regarding driver recognition.

If the NCT vehicle inspector deems that the windscreen or front side windows are excessively tinted the level of light transmission of the window will be tested. It is proposed that the glass in the windscreen and front side windows will be required to have a light transmission level of not less than 65% in order to pass the test.

(2) Rear Fog Lamp

Rear fog lamps enhance the conspicuity of a car in foggy conditions by indicating the vehicle's position and direction of travel to other road users.

The rear fog lamp, where fitted, will be checked to ensure that when in use it provides a red light which is clearly visible. The vehicle will fail if the rear fog lamp is:

- a) Not working or faulty
- b) Missing or not clearly visible
- c) Not red in colour
- d) Lens broken or missing
- e) Insecurely mounted

(3) Reverse Lamp

The reverse lamp of a vehicle provides illumination to the rear when backing up, and warns adjacent vehicle operators and pedestrians of a vehicle's rearward motion.

The reverse lamp, where fitted, will be checked to ensure that when in use it provides a white light which is clearly visible. The vehicle will fail if the reverse light is:

- a) Not working or faulty
- b) Missing or not clearly visible
- c) Lens broken or missing
- d) Insecurely mounted

(4) Tyres

Car tyres are the only point of contact between vehicles and the road. The standard to which tyres are designed and built, is critical to ensuring adequate grip is maintained with the road surface. An "E" or "e" mark indicates that the tyre is certified to comply with the dimensional, performance and marking requirements of international regulations. It may be the case that tyres which are not "E" or "e" marked might not comply with these requirements, thus decreasing the performance of these tyres and endangering not only the vehicle occupant, but other road users also.

Road Traffic (Retreaded Tyres) Regulations 2008 restrict the sale and supply of retreaded tyres to such tyres that have been produced in accordance with the standards laid out in UN/ECE Regulations 108 and 109, bearing the appropriate "E-Mark". SI No 375 of 2007, Road Traffic (Component and Separate Technical Units) Regulations 2007 extends this requirement to new tyres.

All tyres must have an E or e mark and it is proposed that the vehicle will fail if an E or e mark is not visible.

(5) Malfunction Indicators

Today's cars are fitted with a number of warning lamps that provide essential information to the vehicle operator with regard to the correct functioning of critical safety, performance and environmental features. It is proposed that certain safety critical malfunction indicators will be examined at NCT.

If a vehicle is designed and approved for use, based on the inclusion of these systems then such systems should be functioning correctly to pass the NCT. They are important safety features and it is in the interest of the vehicle owner and road safety that all safety systems in the vehicle are in full working order and that any defects in the system are addressed.

The vehicle will be checked to ensure that, where fitted, the malfunction indicators for Airbags, Electronic Stability Control (ESC) systems and Electronic Braking Systems (EBS) / Anti-Lock Brake system (ABS) are in correct working order. The vehicle will fail if a malfunction indicator is not working or indicates a defect in the system.

(6) Rear Registration Plate Lamp

The fitment of rear registration plate lamps provides essential illumination to the registration plate of a vehicle once parking lights are activated.

A check on rear registration plate lamps originally formed part of the current NCT test but was discontinued following the Mid Term Review. It is now proposed to reinstate this check.

The rear registration number plate lamp(s) will be checked to ensure that it shows a white light and is operating effectively. The vehicle will fail if the registration plate lamp(s) is:

- a) Not working, faulty or not fitted
- b) Not white in colour
- c) Lens missing or broken
- d) Showing white light to rear

(7) Vehicle Exhaust Noise

Mass produced vehicles have type approved exhaust systems fitted which limit their noise to acceptable levels. The fitment of replacement non-type approved exhaust and silencer equipment is illegal and a new test is proposed at NCT whereby sound levels will be checked in order to ensure acceptable sound levels are not exceeded.

The nuisance caused by excessive noise from vehicle exhausts is regularly the subject of comments and complaints received by the RSA.

Examination of a cars exhaust silencer, and its effectiveness at reducing noise is part of the current NCT. It is proposed to implement a noise check of vehicles that the vehicle inspector deems to be excessively noisy. This check will measure the level of noise a vehicle is producing through its exhaust system. The vehicle will be required to have a level of noise no greater than 99db in order to pass the test.

(8) Annual Testing of Vehicles over 10 years old

The current frequency of testing private cars in Ireland is in line with EU Directive 96/96/EC i.e. the first test is carried out after four years, with a test every other year thereafter. Currently cars over 30 years old are exempt from the test.

It is proposed that annual testing be introduced for cars ten years and older. It is also proposed that cars over 30 years old would continue to be exempt for the moment. The RSA plans to review the testing policy in relation to these vehicles in due course. The implementation of this proposal would mean that, based on current registrations, circa 120,000 additional cars would be required to undergo an NCT annually.

Pass Rates by Vehicle Age

The table below shows the pass rate by vehicle age in 2006 and 2007 and the estimated additional number of cars that would require a test, if the test was made an annual requirement from that point onwards.

Vehicle age	Pass rate 2006	Pass rate 2007	Estimated additional Full Tests
4 years	72%	68%	N/A
5 years	60%	59%	N/A
6 to 7 years	61%	58%	357,000
8 to 9 years	48%	45%	201,000
10 to 11 years	38%	33%	120,000
12 - 13 years	35%	30%	54,000
14 to 15 years	35%	32%	25,000
16+ years	31%	33%	7,000
Average	53%	53%	

The table shows that the pass rate for private cars up to seven years old is 60% or more. This declines rapidly for cars aged eight to ten years to a pass rate of approximately 35% where it stabilises. This means that two thirds of cars aged 10 years and older presented for a test do not pass first time.

Testing Frequency in Other European States

Whilst a significant number of other European states have a similar testing frequency for private cars there are a number of States which have more frequent testing patterns.

The 2005 review of the National Car Testing Service included a study comparing the National Car Testing Service to other European testing regimes. The table below shows the testing frequency of the different countries included in the study.

Table Showing Testing Patterns of Cars for Road Worthiness in 14 European States

Private Car Road Worthiness Testing Pattern	Countries
Annual Testing after an initial period	Belgium, Luxemburg, Great Britain, Latvia and Northern Ireland
Biannual testing after an initial period then annually after eight years	Switzerland and Portugal
Biannual testing after an initial period then annually after ten years	Spain
Biannual testing after an initial period	Denmark, Germany, Hungary, Netherlands Poland and the Slovak republic

Over 50% of the 14 States that participated in the study had annual testing of private cars in place, at least for older vehicles.

Autofore Report

A Study on the Future Options for Roadworthiness Enforcement in the European Union was undertaken in 2006 by CITA (International Association of Vehicle Inspection). The resultant report entitled the “Autofore Report” recommended improvements in roadworthiness enforcement in the EU to ensure that the benefits accruing from the original design and manufacture of vehicles are retained, where justified, throughout the life of those vehicles.

The most promising options for improving roadworthiness enforcement were identified and analysed. Four of them were subjected to a detailed economic analysis, which was undertaken by the Institute for Transport Economics at the University of Cologne.

One of the options analysed was the increased frequency of testing of older vehicles. The following were taken into account in the analysis:

- Evidence available in relation to the roadworthiness condition of vehicles in the EU
- Failure rates at periodic technical inspections
- Failure rates at roadside inspections
- Main areas of failure
- Electronic systems relevant to safety and environmental protection
- Cost of effect of defects on accidents and emissions.

The study found that increased frequency of testing for older vehicles would improve roadworthiness of vehicles and would have significant wider economic benefits.

New Test Items - Cost Implications

The introduction of the new test items has no implications for test fees. The owners of vehicles over 10 years old, however, would be required to bear the cost of an annual test.

Proposed amendment to NCT Manual

Should the RSA's proposal be adopted and implementing regulations introduced the NCT manual will be amended to include the new items. The current NCT Manual may be viewed at www.ncts.ie.

Road Safety Authority
Standards and Enforcement
23 February 2009

APPENDIX 1

Items to be tested and reasons for refusal of a test certificate

Item 1: Registration plates

Reasons for refusal:

- 1) one or both plates missing, insecure or not clearly visible.
- 2) numbers or letters missing, illegible or incorrect size.
- 3) numbers, letters or background of incorrect colour.

Item 2: Emissions: exhaust smoke (compression ignition engine)

Reasons for refusal:

- 1) The result of the test on exhaust smoke emission is not in accordance with the standard for exhaust smoke emission as specified by the manufacturer of the vehicle, or –
- 2) In the case of vehicles —
 - a) first registered on or after 1 January 1980, the average smoke meter reading is higher than 2.5m⁻¹ in the case of naturally aspirated compression ignition engines, or the average smoke meter reading is higher than 3.0m⁻¹ in the case of turbo charged compression ignition engines,
 - b) first registered before 1 January 1980, the exhaust emission is coloured black haze or darker,
 - c) first registered after 1 January 2008, the average smoke meter reading is higher than 1.5m⁻¹ or
 - d) in the case of a vehicle the maximum engine speed of which is 10% or more below that specified by the manufacturer of the vehicle.

Item 3: Exhaust

Reasons for refusal:

- 1) the emission control system is leaking, incomplete or incorrectly assembled.
- 2) idle speed is above vehicle manufacturer's recommendations.
- 3) engine exhaust system is leaking.

Item 3: Emissions: carbon monoxide

Reasons for refusal:

- 1) the result of the test on carbon monoxide emissions is not in accordance with the standard for carbon monoxide emissions as specified by the manufacturer of the vehicle, or –
- 2) in the case of vehicles first registered –
 - a) before 1 October 1986, the carbon monoxide content is more than 4.5% at idling speed,
 - b) between 1 October 1986 and 31 December 1993 (inclusive of both dates), the carbon monoxide content is more than 3.5% at idling speed,
 - c) on or after 1 January 1994, the carbon monoxide content is more than 0.5% at idling speed,
 - d) on or after 1 January 1994, the carbon monoxide content is more than 0.3% at either an engine speed of 2.000 rpm or at a speed specified by the vehicle manufacturer.
 - e) after 1 July 2002, the carbon monoxide content of the exhaust gases is more than 0.3% by volume at idle speed, or
 - f) after 1 July 2002, the carbon monoxide content of the exhaust gases is more than 0.2% by volume at either an engine speed of 2000 rpm or at a speed specified by the vehicle manufacturer.

Item 3: Emissions: hydrocarbon (HC)

Reasons for refusal:

- 1) the result of the test on hydrocarbon emissions is not in accordance with the standard for hydrocarbon emissions as specified by the manufacturer of the vehicle, or –
- 2) in the case of vehicles first registered before 1 October 1986, the hydrocarbon content is more than 1,000ppm at idling speed.
- 3) in the case of vehicles first registered between 1 October 1986 and 31 December 1993 (inclusive of both dates), the hydrocarbon content is more than 750ppm at idling speed,
- 4) in the case of vehicles first registered on or after 1 January 1994, the hydrocarbon content is more than 200ppm at either 2,500 RPM or at the speed specified by the vehicle manufacturer.

Item 3: Emissions: lambda

Reason for refusal:

- 1) in the case of vehicles first registered on or after 1 January 1994, the lambda value at either 2,500 rpm or at the speed specified by the manufacturer is not 1 ± 0.03 or is not within the vehicle manufacturer's recommendation.

Item 4: Service brake pedal

Reasons for refusal:

- 1) service brake pedal pad or rubber is missing, loose, or worn to the extent that the metal of the brake pedal can be seen.
- 2) mounting is insecure, badly corroded or worn to the extent that the pedal can be moved from side to side.
- 3) pedal travel is obstructed.

Item 5: Service brake operation

Reasons for refusal:

- 1) in hydraulic systems, the pedal tends to creep down, or is felt to be spongy when held depressed.
- 2) travel in the brake pedal indicates air in the brake system or brakes in need of adjustment.
- 3) in systems assisted by vacuum from engine, with pedal depressed and the engine started, no dip is felt in brake pedal.
- 4) warning light for anti-lock braking system not working or indicates a defect in the anti-lock system.

Item 6: Mechanical brake hand lever

Reasons for refusal:

- 1) lever/lever mounting is missing, fractured, badly worn or corroded, insecure or mounting unsatisfactory.
- 2) lever travel is excessive or movement is obstructed.
- 3) ratchet and pawl mechanism (where fitted by manufacturer) is missing, damaged or sticking.
- 4) definite and regular clicks are not heard when operating hand lever.

Item 7: Seats

Reasons for refusal:

- 1) is loose on runners or insecurely mounted.
- 2) is collapsed or framework damaged.
- 3) driver's seat so damaged that driver's support is impaired.
- 4) child seat, where attached to the vehicle, is loose or incorrectly fitted.

Item 8: Horn

Reasons for refusal:

- 1) horn control is insecure.
- 2) horn is insecurely mounted.
- 3) horn is not working correctly.
- 4) horn is not working or is not fitted.

Item 9: Windscreen wipers and washers

Reasons for refusal:

- 1) a wiper arm or blade is missing
- 2) wiper arms and blades are not cleaning windscreen effectively
- 3) wiper arms and blades are operating such that the wiped area is less than sufficient to give the driver an adequate view
- 4) wipers are not operating at normal speed
- 5) wiper control insecurely mounted
- 6) wiper control is not working, is defective or missing
- 7) wiper linkage is broken, excessively worn or insecure
- 8) windscreen washers (where fitted) are not working or not correctly aimed

Item 10: Glass

Reasons for refusal:

- 1) windscreen is not fitted or is not marked as safety glass
- 2) in a vehicle registered on or after 1 January 1986, windscreen is not marked with approved Standard Mark or equivalent as set out on pages 16 and 17 of the National Car Test (NCT) Manual 1999
- 3) objects or stickers on windscreen are in the driver's direct line of vision
- 4) windscreen is damaged beyond acceptable limits by reference to page 18 of the National Car Test (NCT) Manual 1999
- 5) glass side or rear windows not marked as safety glass
- 6) windscreen or windows insecure

- 7) opening mechanism of drivers window not operating
- 8) non-glass windscreens, side or rear windows made of material that, if fractured is likely to produce fragments capable of causing severe cuts to a person
- 9) side or rear window so damaged that it obstructs the driver's view
- 10) glass has a light transmission level of not less than 65%

Item 11: Rear view mirror(s)

Reasons for refusal:

- 1) interior rear view mirror, or where fitted as original equipment by the manufacturer, an external rear view mirror is missing
- 2) reflecting surface of interior mirror or where fitted as original equipment by the manufacturer external rear view mirror is deteriorated or is broken so as to impair driver's view
- 3) head or mounting of any mirror is loose
- 4) interior rear view mirror, or where fitted as original equipment by the manufacturer, external rear view mirror is not adjustable
- 5) estate or hatch back vehicle not fitted with an exterior mirror on each side of the vehicle, except in the case of vehicles not fitted with these mirrors by the manufacturer

Item 12: Speedometer

Reasons for refusal:

- 1) speedometer is missing or is not working.
- 2) speedometer cannot be seen from the driver's seat.
- 3) speedometer lighting is not working.

Item 13: Safety belts

Reasons for refusal:

- 1) for vehicles registered on or after the 1 June 1971, a lap and diagonal type safety belt is not provided for the driver and outer front seat.
- 2) for vehicles registered on or after 1 January, 1992
 - a. a lap and diagonal type belt is not provided for all outer forward facing seats.
 - b. a lap and diagonal or lap type safety belt is not provided for all other forward facing seats.
- 3) any belt, including any for a child seat attached to the vehicle, is badly frayed or cut.

- 4) any belt, including any for a child seat attached to the vehicle, is not operating properly.
- 5) any load bearing member of the vehicle structure or panelling within 30 cm of a safety belt anchorage point is cracked, corroded or in an otherwise weakened condition.
- 6) any belt mounting is unsatisfactory (e.g. incorrect bolts fitted).

Item 14: Steering wheel play

Reasons for refusal:

- 1) excessive rotational play (20° or more) is present in the steering box.
- 2) excessive rotational play (5° or more) is present in the rack and pinion.
- 3) steering wheel/column/shaft has excessive end float, or is insecure or broken.
- 4) any bush/bearings/mounting brackets for steering wheel/column/shaft missing, is worn, damaged or insecure.
- 5) shear pin in telescopic column is broken.
- 6) any universal joint/clamp is damaged, worn, insecure or badly deteriorated.
- 7) any retaining or locking device is missing or insecure.

Item 15: Doors/locks/anti-theft devices

Reasons for refusal:

- 1) a door is missing.
- 2) a door cannot be opened or shut normally or is likely to open on its own.
- 3) a door receiver or catch insecure.
- 4) runners, tracks or an actuating mechanism on sliding door is so defective that the door does not open or close properly
- 5) a sliding door missing.
- 6) any safety device is not working or is defective.
- 7) steering lock, where fitted as original equipment by manufacturer, has excessive wear or is subject to jamming of the lock/barrel/key mechanism.

Item 16: Adaptations for disabled drivers

Reasons for refusal:

- 1) any adaptation is worn, insecure, sticking, fouling or likely to fail.
- 2) a servo or electrical device is defective.
- 3) wiring is insecure, insulation is damaged or is likely to short circuit or fail.

Item 17: Front wheel side slip

Reasons for refusal:

- 1) side slip is more than +/- 14m/km

Item 18: Rear wheel side slip

Reason for refusal:

- 1) side slip is more than +/- 18m/km

Item 19: Front axle suspension performance

Reason for refusal:

- 1) an imbalance of more than 30% performance exists between left hand and right suspension.

Item 20: Rear axle suspension performance

Reason for refusal:

- 1) an imbalance of more than 30% performance exists between left hand and right suspension.

Item 21: Service brake performance

Reasons for refusal:

- 1) the braking effort of the vehicle is less than 55% of the test weight of the vehicle.
- 2) the brake cannot be operated progressively.
- 3) the brake shows abnormal lag when released.
- 4) the brake effort on any wheel is less than 25 kilogrammes force (kgf).

Item 22: Service brake imbalance

Reasons for refusal:

- 1) more than 30% difference is present in braking effort between wheels on the same axle (i.e. the braking effort on one side should not be less than 70% of the braking effort on the other side).

- 2) where a road test is carried out, obvious pull to one side is present when brakes are applied.
- 3) where a road test is carried out, perceptible ovality is present in the service brake.

Item 23: Parking brake performance

Reasons for refusal:

- 1) in the case of a vehicle with a single line braking system and first registered before 1 July 1964, the braking effort is less than 20% of the test weight of the vehicle.
- 2) in the case of a vehicle with a single line braking system and first registered on or after 1 July 1964, the braking effort is less than 27.5% of the test weight of the vehicle.
- 3) in a vehicle with a dual line braking system, the braking effort is less than 16% of the test weight of the vehicle.

Item 24: Parking brake imbalance

Reasons for refusal:

- 1) more than 50% difference is present in braking power between wheels on the same axle.

Item 25: Towing bracket/coupling

Reasons for refusal:

- 1) fastening bolts are loose or missing; securing device on the vehicle drawing pin/ball/jaw is loose or missing.
- 2) a lock or blocking device is missing.
- 3) cracks are present in the main part of the coupling.
- 4) ball, jaw or pin is excessively worn, deformed or damaged.

Item 26: Stop lamps

Reasons for refusal:

- 1) any lamp is missing or not clearly visible.
- 2) any lamp is not working or faulty.
- 3) any lamp is not brighter than tail lights.
- 4) any lamp is not red in colour.
- 5) all lamps are not of same dimensions and intensity.
- 6) any lamp is insecurely mounted.
- 7) any lens missing or broken.

Item 27: Rear lamps and registration plate lamps

Reasons for refusal:

- 1) any rear lamp is missing or not clearly visible.
- 2) any rear lamp is not working or faulty.
- 3) any rear lamp is not red in colour.
- 4) any rear lamp lens is broken or missing.
- 5) rear lamps not of the same dimensions and intensity.
- 6) any rear lamp is insecurely mounted.
- 7) rear lamps are not fitted symmetrically.
- 8) registration plate lamp is not fitted or is not working or is faulty.
- 9) registration plate lamp is not white in colour.
- 10) registration plate lamp lens is missing or broken.
- 11) any lamp is showing white light to rear.

Item 28: Indicators/tell tales

Reasons for refusal:

- 1) any indicator is missing or is not clearly visible.
- 2) any indicator is not working or is faulty.
- 3) any indicator is not flashing constantly between 60 and 120 flashes per minute (flashing type).
- 4) any indicator is insecurely mounted.
- 5) a lens is broken or is missing.
- 6) a lens is not amber in colour in the case of a vehicle first registered after 30 June 1964.
- 7) all front indicators not are amber or white in colour in case of a vehicle first registered before 1 July 1964.
- 8) all rear indicators are not amber or red in colour in case of a vehicle first registered before 1 July 1964.
- 9) where only one indicator is fitted per side:
 - 1) it is not amber in colour, or
 - 2) in the case of a semaphore type only, it does not extend six inches beyond the outline of the vehicle.
- 10) indicator switch is faulty.
- 11) tell tale is missing.
- 12) tell tale is not working or is faulty.

Item 29: Side lamps

Reasons for refusal:

- 1) a lamp is missing or is not clearly visible.
- 2) lens is broken or missing.
- 3) not working or faulty.
- 4) lamps are not white in colour.
- 5) lamps are not fitted symmetrically.
- 6) lamps are not of the same dimensions and intensity.
- 7) a lamp is insecurely mounted.

Item 30: Headlamp condition

Reasons for refusal:

- 1) dipped beams are not working simultaneously.
- 2) main beams are not working simultaneously.
- 3) main or dipped beams is not working.
- 4) light intensity is obviously weak.
- 5) glass is badly cracked or missing.
- 6) reflecting material is damaged/discoloured.
- 7) a headlamp is missing.
- 8) a headlamp is insecurely mounted or contains water/moisture.
- 9) the dip or headlamp switch is insecurely mounted or missing.
- 10) the dip or headlamp switch defective.
- 11) headlamps are dipping to the right.
- 12) all lamps not either white or yellow.
- 13) main beam warning light is not working.

Item 31: Headlamp aim

Reasons for refusal:

In the case of a European type headlamp checked on dip beam -

- 1) for headlamps whose centre is not more than 850mm above the ground, the horizontal cut off line does not lie between the 0.5% and 2% horizontal lines.
- 2) For headlamps whose centre is more than 850mm above the ground, the horizontal cut off line does not lie between 1.25% and the 2.75% horizontal lines.
- 3) The junction of the 15° cut off line and the horizontal cut off line does not lie between the 0% and the -2% vertical lines.

- 4) In the case of a British-American type headlamp checked on dipped beam —
- 5) the upper edge of the hotspot does not lie between the 0% and 2.75% horizontal lines.
- 6) the right-hand edge of the hotspot does not lie between the 0% and the -2% vertical lines.
- 7) In the case of a British-American type headlamp checked on main beam —
- 8) for headlamps whose centre is not more than 850mm above the ground, the hotspot centre does not lie between the 0.0% and the -2% horizontal lines.
- 9) For headlamps whose centre is more than 850mm above the ground, the hotspot centre does not lie between 0.0% and the 2.75% horizontal lines.
- 10) The centre of the hotspot does not lie between the 0% and the -2% vertical lines.

Item 32: Auxiliary lamp condition

Reasons for refusal:

- 1) a fog lamp is incorrectly positioned.
- 2) a fog lamp is insecurely mounted.
- 3) a fog lamp switch is defective.
- 4) a fog lamp is not showing white or yellow light.
- 5) an auxiliary lamp is incorrectly positioned.
- 6) an auxiliary lamp is insecurely mounted.
- 7) an auxiliary lamp switch is defective.
- 8) an auxiliary lamp is not showing white or yellow light.
- 9) an auxiliary lamp is set in main beam position and does not extinguish when dipped beams are brought into operation

Item 33: Auxiliary lamp aim

Reasons for refusal:

- 1) the upper edge of a fog lamp beam is above the 2% horizontal line.
- 2) the centre of a fog lamp beam pattern does not lie between the 0% and -2% vertical lines.
- 3) the hotspot centre of an auxiliary lamp does not lie below the 0% horizontal line.

- 4) the centre of the hotspot does not lie between the 0% and the -2% vertical lines.

Item 34: Reflectors

Reasons for refusal:

- 1) one or both rear reflectors are missing or ineffective.
- 2) a rear reflector is not red in colour.
- 3) a rear reflector is seriously damaged.
- 4) rear reflectors are not matching in size and appearance.
- 5) a rear reflector is insecurely mounted.
- 6) rear reflectors are not fitted symmetrically.
- 7) a side reflector is not amber in colour.

Item 35: Bodywork

Reasons for refusal:

- 1) a primary structural component is broken, cracked, insecure, damaged or rusted to an advanced stage.
- 2) a secondary structural component is missing, insecure, rusted or damaged to such an extent as to leave sharp edges.
- 3) the vehicle body is not sitting squarely due to distortion.
- 4) a bonnet or boot catch is defective or the bonnet safety catch is missing or defective.
- 5) a bumper, bull guard or body strip is insecure.
- 6) a primary structural components has been repaired in such a manner that the original strength of the components has not been maintained.
- 7) the vehicle's original strength as manufactured or original safety of vehicle bodywork as manufactured, is obviously not maintained.
- 8) two halves of different vehicles have been joined together and certification of the safety of the work is not available from the vehicle manufacturer, a mechanical or automotive engineer, an automotive assessor or equivalent person.

Item 36: Tyre condition

Reasons for refusal:

- 1) evidence is present of re-cutting of tread pattern where tyre is not suitable for re-cutting.
- 2) a tyre is incorrectly seated on wheel rim.

- 3) a cut in tyre is longer than 25mm or 10% of section width (whichever is the shorter) and reaches the ply or cords.
- 4) the ply or cord structure is ruptured or exposed, tread is lifting, a lump or bulge has been caused by separation of rubber from cords or weakness in cord structure, or tread distorted or damaged.
- 5) obvious damage or distortion of a valve stem is present.
- 6) a valve stem is chafing against valve hole.
- 7) the sidewall of a tyre has been repaired with the use of a plug.

Item 37: Tyre specification

Reasons for refusal:

- 1) tyres fitted to individual axles are not of the same size, aspect ratio or type.
- 2) radial ply tyres are fitted to the front wheels but not to the rear wheels.
- 3) speed rating of tyres cannot be determined on inspection or is insufficient for maximum legal speed limit.
- 4) a space saving tyre fitted on an axle.

Item 38: Tyre tread

Reasons for refusal:

- 1) the depth of tread is less than 1.6 mm in the central three-quarters of the tread pattern.
- 2) an E or e mark is not visible on the tyre.

Item 39: Wheels

Reasons for refusal:

- 1) cracks or defective welds are present in a wheel.
- 2) a wheel is more than 19mm (3/4") askew or buckled.
- 3) a wheel is incorrectly fitted.
- 4) a wheel is s damage such that tyre damage or seal damage can occur.
- 5) different size wheels are fitted on the same axle.
- 6) any spoke or other wheel component is in such a condition that there is a danger of failure.
- 7) any stud hole is elongated or damaged.
- 8) any studs or nuts are damaged or threads stripped or crossed.
- 9) any stud or nut is missing or loose.

- 10) any stud or nut is in such a condition that there is an obvious danger that the wheel will come loose.
- 11) any wheelnut is wrongly fitted.
- 12) an incorrect wheelnut is fitted.

Item 40: Spare wheel

Reasons for refusal:

- 1) spare wheel carrier (where fitted) is cracked or insecurely mounted
- 2) spare wheel (where present) is insecurely held in its place.

Item 41: Brake fluid

Reasons for refusal:

- 1) the reservoir is less than half-full or is below manufacturer's "minimum" level.
- 2) the reservoir cap is leaking or cap missing.
- 3) the fluid is obviously dirty or contaminated.

Item 42: Chassis/underbody

Reasons for refusal:

- 1) a weld is breaking away.
- 2) the chassis/underbody is cracked or insecure or pronounced misalignment is present.
- 3) loose rivets or bolts are loose or chassis members are bent.
- 4) the chassis/underbody is considerably weakened by holes.
- 5) advanced corrosion or other equivalent damage is present.
- 6) repairs or modifications are obviously not in line with manufacturer's recommendations.

Item 43: Steering linkage

Reasons for refusal:

In the case of rack and pinion steering -

- 1) a linkage is damaged or insecure.
- 2) splines are worn or damaged.
- 3) bushes/bearings are excessively worn.
- 4) excessive end float is present in pinion.
- 5) obvious stiffness in linkage.
- 6) steering rack gaiter is insecure, split or missing.

- 7) steering box suffers form obvious stiffness or bearings are damaged or worn.
- 8) steering box is damaged or insecure or excessive end float is present in a steering box shaft.
- 9) axial or radial play is present in the linkage, splines are worn or a shaft is twisted.
- 10) a drop arm/drag link is damaged or insecure.
- 11) a drag link or the track rod ends are obviously worn or insecure.
- 12) idler assembly mounting is obviously loose, or axial or radial play is present in the assembly.
- 13) track rod/steering arm is obviously deformed, loose or cracked.
- 14) 3mm (1/8") or more play is evident at wheel rim on 14" diameter wheel in respect of king pin/ bushes/ bearings, at wheel rim or another diameter wheel rim displays pro rata play.
- 15) excessive lift exists between stub axle and axle beam.
- 16) stub axle is damaged or bent.
- 17) a retaining or locking device (split pin, nut, rivet, weld, etc.) is missing, insecure worn or broken.
- 18) steering housing is damaged or worn.
- 19) a mounting bolt for steering housing is missing or loose.
- 20) any steering component has been repaired by welding.
- 21) cracks or corrosion are present around attachment points for steering box, rack or idler box.
- 22) power assistance is not available consistently over full lock to lock range.
- 23) power assistance is not operating where power steering is a standard fitment by the manufacturer on all vehicles of the type of vehicle being tested.
- 24) power steering fluid level is below minimum level.
- 25) a power steering fluid pipe is fouling other components.
- 26) leaks are present in power steering fluid pipes.
- 27) power steering pump is worn, noisy, leaking or has a defective drive.
- 28) continuous oil leak is present from steering box/rack/ or steering damper.
- 29) steering is over or under locking or is fouling any other component on the vehicle.

Item 44: Wheel bearings

Reasons for refusal:

- 1) excessive play is present in bearings.
- 2) bearings are too tight.
- 3) bearings are worn or damaged.

Item 45: Front springs

Reasons for refusal:

spring (coil/leaf), torsion bar -

- 1) are worn or exhausted.
- 2) any spring leaf is broken, missing or repaired by welding.
- 3) fitted incorrectly.
- 4) a spring clamp is missing.
- 5) a U-bolt is loose or missing.
- 6) a coil spring or torsion bar broken.

spring mounting or torsion bar mounting -

- 7) is obviously loose.
- 8) is obviously cracked or damaged.

spring eye- bolts/shackle pins -

- 9) a locking device is missing or insecurely fitted.
- 10) spring eye- bolts/shackle pins are worn, incorrectly positioned, are of an incorrect type or are missing.
- 11) a spring eye- bolt/shackle pin is obviously loose in its bush.

spring or shackle bushes -

- 12) are worn, missing or perished.
- 13) a spring centre bolt missing or damaged.
- 14) a bump stop missing or ineffective.

air, hydrolastic, hydragas suspension -

- 15) leaks are present in system.
- 16) a linkage to levelling valve defective.
- 17) a valve is insecure or defective.
- 18) a suspension bellows is giving inadequate movement with risk of wheel fouling.
- 19) a pipe is damaged to the extent that it is likely to fail.
- 20) the vehicle is sitting on bump stops.

bonded suspension units -

- 21) failure of rubber/metal attachment has occurred.
- 22) deterioration of suspension medium has occurred.

Item 46: Front suspension

Reasons for refusal:

- 1) axle beam is obviously out of line.
in respect of wishbones, swinging arm, track control arm, suspension strut —
- 2) a mounting obviously loose or worn.
- 3) a component or mounting is cracked, damaged or deformed.
in respect of anti-roll bar, torque arm/rod, radius rod/link -
- 4) a component is missing or broken.
- 5) a mounting is loose.
- 6) a component is cracked, damaged or deformed.
in respect of bushes, ball joints, and sliding bushes or swivel joints -
- 7) excessive wear is present.
- 8) a component is insecure.
- 9) a suspension mounting area is deformed or corroded to such an extent that the security or alignment of the suspension component is affected.
- 10) a retaining or locking device (split pin, nut, rivet, weld, etc.) is missing, insecure worn or broken

Item 47: Brake lines/hoses

Reasons for refusal:

- 1) are perished, kinked, damaged or rusted to the extent that the pipe is pitted.
- 2) are unsatisfactorily mounted with the possibility of failing.
- 3) leaks are present.
- 4) a line or hose is fouling moving parts.
- 5) a line or hose is bulging under pressure.
- 6) inadequate repairs have been carried out to lines or hoses or unsuitable fittings are present.

Item 48: Shock absorber condition

Reasons for refusal:

- 1) obvious leak are evident in a shock absorber.
- 2) a mounting bracket or bush is missing, loose or damaged.
- 3) a shock absorber is missing or damaged.

Item 49: Electrical system

Reasons for refusal:

- 1) ignition switch is missing.
- 2) ignition cannot be switched off.
- 3) ignition key cannot be removed.
- 4) wiring is liable to interfere with the driver's control of the vehicle.
- 5) risk of fire is present, including risk associated with:-
 - dislocated or insecure electrical wiring,
 - electrical wiring insulation damaged,
 - after-market items with the exceptions of taxi roof-signs, anti-theft systems and light failure indicators not being wired through ignition switch.
 - use of unsuitable wiring, e.g. household wiring/bell wiring.
- 6) battery mounting is unsatisfactory.
- 7) risk of short-circuiting is present with battery.
- 8) leakages from battery are evident

Item 50: Fuel system

Reasons for refusal:

fuel tank, fuel filter systems and fuel lines -

- 1) a component is incorrectly or loosely mounted or damaged.
- 2) advanced rust is present in fuel tank.
- 3) Leaks in system are evident.
- 4) unsuitable fuel tank has been fitted.
- 5) LPG/CNG tank has been fitted inside vehicle without being in a sub-compartment or without having valves piped to the outside.
- 6) LPG/CNG venting or ducting pipes are damaged or blocked.
- 7) sub-compartment is obviously not gas-tight where valves are not piped to the outside.
- 8) fuel tank is fitted to roof of vehicle.
- 9) a manual or solenoid valve is not operating.
- 10) possibility exists of fuel lines being crushed, chafed, ruptured or subject to excessive vibration.
- 11) fuel cap or fuel cap seal is missing.
- 12) throttle control —
- 13) is sticking, binding or excessively worn.
- 14) a link pin, retaining device or safety device is missing.
- 15) mounting bracket or panel is cracked or fractured.

- 16) excess fuel device gives off excessive smoke if operated from within the passenger compartment after the engine has been started.
- 17) engine stop control (on diesel vehicles) is not working or is missing.
- 18) air filter assembly is insecure, missing or incomplete.

Item 51: Brake wheel units

Reasons for refusal:

- 1) a hydraulic brake unit is insecurely mounted.
- 2) a hydraulic brake unit is leaking.
- 3) a hydraulic brake unit is sluggish in operation or is seized.

Item 52: Mechanical brake components

Reasons for refusal:

- 1) a brake rod/lever/cable/linkage/pivot is missing, damaged, cracked, seized, obstructed or worn.
- 2) a brake rod/lever/cable/linkage/pivot is incorrectly fitted.
- 3) a bracket, mounting bolt, split pin or other retaining device is missing, loose or worn.
- 4) brake linings are contaminated.
- 5) brake linings are incorrectly adjusted.
- 6) brake shoes or pads are in need of replacement.
- 7) a brake drum/disc/backplate is obviously damaged, askew, or insecure.
- 8) in relation to actuating levers —
- 9) a lever is damaged, insecure or is in need of adjustment.
- 10) a lever is operating over centre.
- 11) danger is present of brakes locking.
- 12) free movement of brake rod/levers/cables etc. is restricted.

Item 53: Master cylinder/servo/valves/connections

Reasons for refusal:

- 1) master cylinder/reservoirs are insecurely mounted or mounting panel is cracked.
- 2) master cylinder/reservoirs is leaking or defective.
- 3) servo is insecure or defective.
- 4) servo is damaged, badly corroded or leaking.
- 5) a valve is insecurely mounted, leaking or defective.

- 6) the load sensing or brake proportioning valves are missing damaged, leaking, inoperative, obviously incorrectly adjusted or a linkage is sticking.

Item 54: Exhaust system/noise

Reasons for refusal:

- 1) exhaust pipe is badly mounted or is liable to fall off.
silencer —
- 2) is missing or is not functioning or excessive noise is being emitted.
- 3) is badly mounted or likely to fall off.
- 4) has serious leaks.
- 5) a risk of fire is present because of leaks or broken components in exhaust assembly.
- 6) vehicle exhaust noise has exceeded a specified level of 99db

Item 55: Rear suspension

Reasons for refusal:

axle beam, trailing arm, wishbones, swinging arm, track control arm, suspension strut-

- 1) a component is obviously askew.
- 2) a mounting bush, bearing or bearing carrier, shaft, ball joint is obviously loose, worn or insecure.
- 3) a component is cracked or damaged.
anti-roll bar, transverse rod, radius rod/link -
- 4) a mounting is loose.
- 5) a component is cracked or deformed.
- 6) a component is missing or broken.
bushes, ball-joints, sliding bushes or swivel joints -
- 7) a component is showing excessive wear.
- 8) a component is insecure.
- 9) a mounting area is damaged or corroded to such an extent that the security or alignment of the suspension component is affected.

Item 56: Rear springs

Reasons for refusal:

spring(coil/leaf), torsion bar -

- 1) is worn or exhausted.
- 2) a spring leaf is broken, missing or repaired by welding.

- 3) a component is fitted incorrectly.
- 4) a spring clamp is missing.
- 5) a U-bolt is loose or missing.
- 6) a coil spring or torsion bar is broken.
- 7) a spring mounting or torsion bar mounting is obviously loose.
- 8) a spring mounting or torsion bar mounting is obviously damaged.
- spring eye- bolts/shackle pins -
- 9) a locking device is missing or insecurely fitted.
- 10) a component is worn, incorrectly positioned, missing or is of an incorrect type.
- 11) a bolt/shackle pin is obviously loose in its bush.
- 12) a spring, shackle bush or slipper pad is worn, missing or perished.
- 13) a spring centre bolt missing or damaged.
- 14) a bump stop is missing, damaged or ineffective.
- air, hydrolastic, hydragas suspension —
- 15) a leak is present in a components.
- 16) a linkage to levelling valve is defective.
- 17) a valve is insecure or defective.
- 18) a suspension bellows is giving inadequate movement with risk of wheel fouling.
- 19) a pipe is damaged to the extent that it is likely to fail.
- 20) the vehicle sitting on bump stops.
- bonded suspension units -
- 21) failure of rubber/metal attachment has occurred.
- 22) deterioration of suspension medium has occurred.

Item 57: Transmission

Reasons for refusal:

- 1) clutch pedal pad or rubber is missing, loose, or worn to the extent that the metal of the clutch pedal can be seen.
- 2) a driveline component is liable to lock up or break away.
- 3) a propeller shaft or half shaft bearing/bearing housing/ housing mounting is askew, damaged or worn.
- propeller shaft/half shaft couplings -
- 1) a component is worn.
- 2) a bolt, nut or stud is lose or missing.
- 3) a lock tab is missing.
- 4) a coupling is obviously worn or its grease boots are missing or torn.

- 5) lubrication oil continually dropping.
- 6) an engine or gearbox mounting is insecure, deteriorated or broken.

Item 58: Rear Fog Lamp

Reasons for refusal

- 1) Not working or faulty.
- 2) Missing or not clearly visible.
- 3) Not red in colour.
- 4) Lens broken or missing.
- 5) Insecurely mounted.

Item 59: Reverse Lamp

Reasons for refusal

- 1) Not working or faulty.
- 2) Missing or not clearly visible.
- 3) Lens broken or missing.
- 4) Insecurely mounted.
- 5) Not white in colour

Item 60: Airbags, Electronic Stability Control (ESC), Anti-Lock Brake system (ABS) / Electronic Braking System (EBS) Indicator Lamp

Reasons for refusal

- 1) Malfunction Indicator not working or indicates a defect in the system.

Working To Save Lives

Údarás Um Shábháilteacht Ar Bhóithre Road Safety Authority

Páirc Ghnó Ghleann na Muaidhe, Cnoc an tSabhaircín, Bóthar Bhaile Átha Cliath, Béal an Átha, Co. Mhaigh Eó
Moy Valley Business Park, Primrose Hill, Dublin Road, Ballina, Co. Mayo
local: 1890 50 60 80 fax: (096) 25 000 email: info@rsa.ie website: www.rsa.ie