

VEHICULAR ACCIDENTS

Physical Evidence from the Roadway

Marks on the road are important to determine what happened in an accident. Every motor vehicle accident leaves some physical evidence of what happened. If the marks are correctly interpreted, they cannot be disputed. Hence it is necessary to look carefully for inconspicuous marks, line scuffs, scratches, and spatter which may be covered by debris or destroyed. Memory is not sufficient and hence a record should be made of all marks by careful measurements and photographs.

Almost every accident will have at least one and usually several of the marks that we are going to study. These results are extremely important to the investigation and hence all marks should be measured and photographed. Notes describing the marks should be prepared as soon as possible.

I. Final Positions Of Vehicles And Bodies

The final positions of the vehicles and bodies should be noted down. The accident could be controlled as well as uncontrolled. In each case the positions should be located by measurements for any serious accident. If the vehicle hits pedestrians then driver drives vehicle to the side of the road.

II. Tyre Marks

Mistakes in dealing with tyre marks are the most common and detrimental errors committed in accident investigation. Hence care should be taken while dealing with them. Tyre marks are made in three ways, each leaving a distinct mark and having completely different meanings. They are,

- A. Skid mark – tyre sliding, wheel not rotating.
- B. Scuff mark – tyre sliding, wheel rotating.
- C. Prints – tyre not sliding, wheel rotating.

A. Skid mark

Skid marks as evidence indicate,

- a) location on the road of the tyre that made the mark (both pre and post collision) .
- b) wheels and tyres were locked and not rotating.
- c) brakes were applied hard and locked.
- d) reduction in speed.
- e) evidence of minimum speed at beginning of visible skid.
- f) direction of travel.

There are eight classifications of skid marks,

- a) Pavement grinding: collection of material embedded in the tyre and treads being ground on the road surface.
- b) Tyre grinding: tyre is ground by the pavement, small bits of rubber are ground off the tyre.
- c) Erasing: clean area on pavement where tyre has erased or removed dirt or other materials from pavement.
- d) Squeegee marks: areas where sliding tyre rubs moisture off the surface of the pavement.
- e) Smear of soft material: snow, mud or debris smoothed or spread by sliding tyre.
- f) Smear of bituminous material: excess tar, asphalt, usually warm, spread by sliding tyre.
- g) Tyre smear: rubber melted from tyre rather than material melted from road surface by sliding tyre.
- h) Furrow: ploughed depression made by sliding tyre with material piled up on each side and at the end.

Tyres are designed with thicker tread on outside edges to give uniform distribution of weight at normal inflation and normal vehicle weight. During a straight ahead skid, brakes are locked, wheel stops

rotating and tyre begins to slide. Heat is generated between the tyres and surface, it is sliding on, by friction, causing a reduction in speed (energy change). Weight shift will occur when the vehicle is braked hard, causing distinguishing characteristics of front and rear skid marks. Front tyres become overdeflected, with most of the weight pressing down on the outside edges much darker and centre treads lighter. With more weight on front tyres, more heat is generated by friction, causing front tyre marks to be darker. Rear tyres become underdeflected, with weight being removed from these tyres and transferred to the front tyres. Outside treads will leave the road surface and only the centre area of the tread will contact the surface. Overloading of the vehicle or incorrect air pressure in the tyres can cause overdeflection in rear tyres making their skid marks look like front tyre skids.

Skid marks can be of different lengths,

- a) If brakes are applied hard, all four tyres will lock and start to skid about the same time.
- b) On vehicles with front disc brakes and rear drum brakes, front may lock-up first.
- c) Malfunction of brake system may cause wheels to lock at different times causing different length skid marks and possibly cause vehicle to swerve while skidding.
- d) Skid mark shadow is the beginning of the skid i.e. mark left by a braking tyre just before it stops rotating. Braking is most effective at this time. The mark will be very light and may be only a cleaning of the road surface and will lead directly into the darker skid mark. This shadow mark must be located and measured as part of the skid mark.

Beginning of the skid will always have some shadow. Although shadow is almost always present, it may not be seen on all road surfaces. The end of the skid mark will be dark and usually end abruptly. Sometimes the rear tyres will skid directly over the front tyre marks (overlapped skid marks). With this situation one may be able to find the beginning of the rear wheel skids and not the end, or possibly only be able to see front tyre skids and no marks from the rear.

Characteristics of Skid marks and Irregularities

- a) On a flat level surface a vehicle will slide to a stop in a straight line. Turning of the steering wheel will not change the direction of the vehicle during the skid.
- b) Most roadways are crowned for water drain off or have super elevation. A vehicle skidding on this type of roadway will have more weight on the lower side because of a natural weight shift to the lower side. When the tyres are skidding, the weight shift and gravity pull on the low side tend to cause the vehicle to draft to the low side causing a curve in the skid mark.
- c) Skidding across two or more surface (asphalt) to concrete bridge, etc)
 1. If the skid is straight ahead and gets from one surface to another, the only change will be in the rate of deceleration.
 2. If the wheels on one side are on a different surface than the wheels on the other side, the vehicle will swerve or rotate towards the side with the most friction.
- d) Offsets in skid marks occur when an outside force causes a change in direction of the sliding vehicle. They show location of tyres at point of collision and the direction of force applied that changed the direction of the vehicle.
- e) Skip skids occur when a locked tyre bounces on the roadway. The blank spaces are usually shorter than three feet. Bouncing is usually caused by:
 1. Tyre striking a hole, bump, rut, or other irregularity in the road surface.
 2. Vehicle collides with another vehicle or object causing rear tyres to lift off the pavement.
 3. Unloaded or lightly loaded semitrailer.
 4. Unusually stiff suspension in rear of vehicle (police vehicles).
- f) Skip skids are measured as though there were no blank spaces because the time the tyre is off the pavement is compensated by the force of the tyre striking the pavement.
- g) Gap skids occur when locked tyres are released and then brakes reapplied by the driver. Gaps are usually a minimum of 15 to 20 feet, depending upon the speed of the vehicle and the driver's

reaction time. Gaps are not measured since the tyres are rolling during the gap, only measure the visible skid marks.

h) **Skids without 4 – Wheel Lock – up.**

1. rear wheels only – if driver does not correct by steering, vehicle will turn around 180 degrees and continue to slide backwards.
2. Front- wheels only – vehicle will slide straight, the same as with 4-Wheel lock-up, but will 'take longer to stop.
3. Two wheels locked on one side – car turns sharply towards locked side. It usually will cause sharp spin.
4. One front wheel not locked – vehicle tends to turn as though only rear wheels are locked, but will rotate towards the side of the locked front wheel. Some steering input is possible from the rolling tyre.
5. One rear wheel not locked – makes little difference in vehicle behaviour. Vehicle will turn slightly toward the side of the locked wheel.

i) **Scrub Marks – a tyre mark (skid) resulting from a tyre that is locked or jammed by collision and sliding on the roadway. Scrub mark often helps locate position of vehicle.**

B. Scuff Marks

Indicates vehicles tyres were rotating and sliding. Scuff marks are of three types, viz. yaw scuffmarks, acceleration scuffmarks, and flat tyre marks.

a) **Yaw Scuffmarks - (Sideslip Scuffmark)**

It is the most important kind of scuffmark and is sometimes called "critical speed" scuffs. The tyre is rotating and sliding sideways parallel to the axle. Yaw marks are made by steering. The vehicle is rotating about a vertical axis as it moves along its path, which means the vehicle is not moving in the direction it was headed.

Yaw marks as evidence indicate,

1. Show path of vehicle during sideslip.
2. Shows vehicle speed was too fast to make curve.
3. Useful for speed estimates.

Characteristics of Yaw Marks

1. Always curved, because they result from steering.
2. Outside tyres will leave darker marks because of weight shift.
3. Radius of the yaw marks will be different over the entire length of the marks.
4. The length of the marks is not useful in speed estimates.
5. The width of a yaw mark will usually be less than the width of the tyre tread.
6. Striations will be nearly crosswise of the mark at the beginning and change to oblique marks as the yaw progresses.

b) **Acceleration Scuff marks**

They are friction marks made by a tyre driven by the engine and spinning. Acceleration scuffs look like skid marks except they start dark and then fade. Acceleration scuffs may be curved as the vehicle "fish-tails".

c) **Flat Tyre marks**

They are caused by head build – up from friction. They are usually very long and have scalloped or wavy edges. Usually only outside mark of each tyre is visible.

C. Tyre Prints

Tyres that are rolling without sliding leave no friction marks, but they may leave other kinds of marks. They may be prints on paving, tyre rolling through liquid on pavement or impressions in soft material. They are useful in showing path of vehicles over these materials and to show that the vehicle was not sliding or braking.

D. Metal Scars - Marks by Metal on The Road Surface

A. Scratches

Scratches are marks left on the road by sliding parts of vehicle, other than tyres. There are two different kinds of scratches left by accidents,

1. Slight Tearing: forcing aside of road materials by light metal parts of the vehicle.
2. Rubbing or smoothing of the road surface and rubbing off of vehicle material.

Scratches as evidence indicate,

1. Useful in locating the position of the vehicle at time of collision.
2. Path of vehicle after collision.
3. Where the vehicle overturned.

Characteristics of scratches

1. Scratches left by body parts are usually not deep and generally appear as a broad series of roughly parallel striations.
2. Rounded edges of rims and other parts leave slightly depressed markings, especially in asphalt, and will seem to have polished the part making them.
3. Hard parts of the vehicle, frame, bolt heads, bumpers, etc., will generally leave fine narrow grooves. Scratches of this type will often precede gouges.

B. Gouges

Gouges are holes, depressions or grooves left when material is dug out of the pavement by strong and hard parts of a vehicle. Gouges are excellent evidence for establishing maximum engagement and are usually easily matched. The part of the vehicle leaving the gouge will have road material on it. One can match by measuring the lateral contact part width to the width of the gouge. Gouges should be looked in all collisions where suspension parts are broken, or if a tyre is deflated.

Types of Gouges,

1. Chip gouge: hole left when a chunk of road material is broken out.
2. Chop gouge: made by a broad, sharp edge across the direction of movement of the part making the gouge.
3. Groove gouge: deep, long and narrow furrows in the road material left by protruding bolts, etc.

E. Debris (Most Common Evidence of Collision)

- a) Debris is the accumulation of broken parts of vehicles, rubbish, dirt and other materials left at the accident scene by collision.
- b) Debris is generally not useful in locating the positions of vehicles at initial contact, unless the speeds of the vehicle involved is very slow. The debris before the collision is travelling at the same speed as the vehicle. When the vehicle decelerates rapidly due to collision, the debris is knocked loose and falls decelerating at a slower rate than the vehicle. The debris will first make contact with the ground at some distance from initial contact.
- c) Debris may be useful in identifying vehicles that have left the scene (hit and run).
- d) In some accident, direction of travel after the collision can be determined from debris. Debris will usually scatter and not be located at the point of collision. When a vehicle hits a fixed object, debris will scatter from that point in the direction of the movement of the vehicle.

- e) Underbody debris is mud, dust, rust, paint and tar knocked loose from the underside of the vehicle. It will usually be in a "fan" pattern from where the debris hit the pavement and continues in the direction the debris was travelling as it hit. This may not be the same direction the vehicle was travelling. When a vehicle is stopped or moving slowly, debris may fall into grooves of the tyres and be deposited on the roadway.
- f) Vehicle parts are debris when broken off and detached from the vehicle. They
 1. will scatter and tumble.
 2. distribution of parts may show general path of vehicle after collision.
 3. not useful in determining point of initial contact.
- g) Vehicle fluids are debris when splattered or spilled on road by force of collision, or dropped by broken containers.
Coolant from radiator is most common. Since it is under pressure, it may be forcefully propelled onto roadway, giving indication of position of vehicle at collision. It must be observed soon after collision for position estimate, because it will begin to run-off immediately.
Other examples of liquid debris are, engine oil, petrol and diesel fuel, fluid from automatic transmissions, fluid from manual transmissions and differentials, battery acid (will bleach road) and brake fluid.
- h) Spatter is any liquid from vehicle or cargo forcibly thrown on the road.
- i) Dribble is a liquid which drips or drops onto the road. It may show the path of the vehicle following collision and may be useful in hit and run investigations.
- j) Run – off is a dribble that forms a puddle and flows or trickles to the edge of the road. It will usually show final rest of vehicle and will show road elevation.
- k) Solid cargo is considered debris when it is thrown or dropped on the road. It may cover other important marks.
- l) Blood is considered as debris. It is important in locating where a body came to rest, or was located in a vehicle and may show the path of a body travelled before it came to rest.

F. Damage To Fixed Objects

Fixed objects like guard rails, fences, sign posts, trees, bridges and other structures on and next to the road surface may be damaged in an accident. These damages help in establishing the path of the vehicle following the collision. They may establish positively the final position, even after the vehicle has been moved. The part of the vehicle doing the damage usually can be determined by marks left on the vehicle. Some fixed objects may show repeated damage, so it is important to examine carefully for new damage. Speed estimates from damage to fixed objects are usually inaccurate and not reliable.

G. Signs That The Vehicle Left The Ground

In many accidents, the vehicle is in the air for a short time while falling or flipping. Marks can be located where vehicle left the ground, and especially where the vehicle re-contacts the ground. Careful measurements are necessary for speed estimates. The marks can be of two types,

- a) Falls: The vehicle runs off a bridge or bank and falls through the air. No marks will be present between where it left the surface and landed. The vehicle almost always lands right side up, but may continue on past the initial point where it lands.
- b) Flips or vaults: These marks occur when the moving vehicle hits something that stops the wheels suddenly such as a curb. The tyre furrows in during sideslip.

H. Combination Of Marks

There are many combinations of road marks that are possible, and in fact most accidents will leave combinations. The investigator must correctly locate and record each mark and combination of marks to complete an accurate investigation.

Physical Evidence From The Vehicle

Most pre-existing conditions are not contributing factors in auto accidents; however, sometimes a pre-existing condition can be a direct cause or factor.

Vehicle defects may be present beforehand, but have no relationship to the accident. Such as,

- a) Slick tyres on a stopped vehicle.
- b) Broken headlight in daytime accident.

If it can be shown that the accident would not have occurred in the vehicle had it not been defective, the defect can be considered the cause of the accident. Very often vehicle condition or mechanical defects in combination with driver error are the primary factors of an accident.

Some pre – existing conditions or defects in vehicles are difficult to distinguish from collision damage or just collision damage; others are obvious. Following investigation should be done in that case,

- a) Look for marks left on the road such as,
 1. Flat tyre mark leading to collision
 2. Wheel coming off prior to collision
 3. Brake fluid on road prior to collision
- b) Take statements from drivers. Many times a driver will claim vehicle defects to explain accident. The investigator should make a complete examination of vehicle if the driver claims the vehicle caused an accident.
- c) Look for vehicle defects in accidents where road conditions or driver action does not appear to be a factor.
- d) Look for vehicle defects in accidents where the vehicle is in obvious bad condition or needs repair.

Classifications of Vehicle Damage Conditions

- a) Preceding but not contributing: Damage or defect in the vehicle that is present before the accident, but did not contribute to the accident.
- b) Preceding and contributing: Damage or defect in the vehicle that is present before the accident and contributes to the sequence of the accident.
- c) During collision: Damage that occurs during the collision is very important and should be accurately recorded for investigative and reconstruction purposes.
- d) After collision and before final rest: This type damage can help determine the path of the vehicle after collision, and is useful in determining angles of departure. Care must be taken not to confuse collision damage and post-collision damage.
- e) After collision and final rest on scene: Rescue operations, vandalism/ theft, etc.
- f) During removal and storage. Care must be taken not to confuse this damage with other types of damage.

Common Vehicle Defects In Accidents

a) Tyres:

Tyres are most often blamed for accidents.

1. Slick tyres on dry pavement actually have better stopping ability in skids.
2. Slick tyres on wet pavement have far less stopping ability in skids.
3. Slick tyres on wet or dry pavement have less traction in yaw situations than good tyres.
4. Often a driver will claim a "blow-out" caused the accident, when actually the tyre went flat during the collision. Close examination of the tyre and wheel assembly can sometimes reveal when the tyre went flat.

b) Brakes:

Brakes will be factors in an accident, but seldom the direct or only cause. Worn out brakes, (lining worn to metal to metal contact) usually will still lock a wheel when applied hard. In this situation

there may be erratic braking action where some wheels lock before others. Defective brakes that cause "pull" can cause the driver to over – steer and lose control of the vehicle. Hydraulic failure in late model vehicles will normally effect only two wheels of the system. On early model vehicles, there can be total hydraulic failure with total loss of brakes, except the parking brake.

c) Suspension and steering:

1. Breaking of the suspension or steering components is not common and usually easily recognized as pre or during collision failure.
2. Loose parts or excessive play in steering system may cause poor control of the vehicle and contribute to the accident.
3. Altered suspension systems (raising or lowering the vehicle from standard height) adversely affects the stability and handling characteristics of vehicles.

d) Wheels:

If a wheel breaks or comes off prior to a collision it usually will leave definite marks on the roadway and/or vehicle.

e) Driver's vision:

1. Cracked glass, foreign material over missing glass areas, and lights can be contributing factors in accidents.
2. Windshield wiper condition should not be overlooked in accidents during times when moisture would be present.

Vehicle Examination at Accident Scene

For minor accidents only the information needed to complete the report and investigation is necessary. But for severe accidents, a detailed examination of the vehicles is necessary including descriptions of damage, measurements of damage, and photographs.

For on – scene examination, final position of the vehicle is usually the most important observation to make on scene at a serious accident. Following survey should be done,

- a) Good photographs on scene are essential. This will prove damage examined later is the same as the actual damage on scene.
- b) Major parts that are detached (wheels, doors, fenders, engine, hood, etc.) should be noted.
- c) Tyres must be checked whether they are inflated or deflated and their location on vehicle. Tyres should be examined at the scene because marks on tyres often do not survive after the vehicle is moved. The marks produced by tyres are,
 1. A tyre that has been skidded to a stop will have a definite visible area indicating the skid.
 2. A tyre that has been in a yaw scuffmark will have striations visible on the surface.
- d) Each external lamp on the car should be examined and its condition should be noted i.e. they are on, unbroken and off or broken. The position of the headlight switch is on or off should be noted. If off, it should never be turned on to see whether the lights work. One may destroy the only indication in one of the lamps that it was on or off when the collision occurred.
- e) Contents of the vehicle should be noted at the scene. Luggage, animals, food, alcoholic beverages, etc. should be noted. Care should be taken to find out anything that could cause a obstruction in viewing.

Follow - up Examination

Follow – up examination is usually handled by an investigator who has expertise in advanced accident reconstruction. Following examinations should be undertaken,

a) Contact Damage:

Damage to any part of a motor vehicle by direct contact with some object which is not part of the vehicle. Contact damages are of two types,

1. **External Contact Damage:** Most useful in collision diagrams and in determining collapse, thrust and overlap.
2. **Internal Contact Damage:** Occupants striking the interior of the vehicle. These damages are helpful in locating occupants inside the vehicle by matching injuries to internal contact damage. But they can be misleading, such as the rear passenger being thrown forward and striking windshield.

Contact damage on laminated safety glass usually causes fractures radiating and encircling the contact area in a spider web pattern. Contact damage on metal is shown by scratches, paint rub-off, road material, tree bark, pedestrians clothing, body tissue, etc.

b) Induced Damage:

Damage to any part of a motor vehicle caused by some other part of the same vehicle or by the shock of collision. Induced damage to laminated safety glass usually results in parallel fracture lines. Induced or contact damage to tempered glass is almost always impossible to distinguish because by design, this type of glass shatters into small pieces. Induced damage to metals and body parts is generally indicated by folds, creases and wrinkles rather than by scratches or crumpling.

c) Road Contact:

Gouges, grooves or scratches found on the road should be matched with contact damage areas on the vehicle. Grass pinched between tyre and wheel can give indication of direction of travel. Contact damage causing gouges or holes in pavement locates the vehicle during maximum engagement.

d) Speedometer Readings:

Sometimes speedometer readings can show the speed of the vehicle at collision. Speedometer needle is very sensitive and can "jump" during first stages of collision and then be jammed giving false reading or indication of speed. If the needle is jammed by an outside source, (gear lever, etc.) it may show a fairly reliable indication of speed, when it was jammed.

RAILWAY ACCIDENTS

Definitions

- 1) **Train:** A train is a set of vehicles, empty or loaded, worked by locomotive, or any other self propelled unit including light engine / engines, or rail-motor vehicles or a single rail motor vehicle, empty or conveying passengers, live stock, parcels or goods, which cannot be readily lifted off the track and running under a particular number or a distinct name from fixed point of departure to a fixed destination. Part of a train shall also be treated as a train for the purpose of this definition, classification and statistics. The train engine or any other vehicle once put on the train continues to be a part of the train until the station is reached beyond which it is not required to go on the same train. At such stations, the moment the train engine or any other vehicle is cut off the load, it ceases to be a part of the train.
- 2) **Passenger Train:** A train intended solely or partly for the carriage of passengers shall be treated as a passenger train. A workmans train or a ballast train or a material Train or an Accident Relief train or a Tower wagon or such other train carrying workmen, or Cattle special / Military special carrying authorized escorts or similar such train shall be treated as a passenger train.
- 3) **Accident:** For the purpose of Railway working, accident is an occurrence in the course of working of Railway which does or may affect the safety of the Railway, its engine, rolling stock, permanent way and works, fixed installations, passengers or servant or which affect the safety of others or which does or may cause delay to train or loss to the Railway.

- 4) **Serious Accident:** Accident to a train carrying passengers which is attended with loss of life or with grievous hurt to a passenger or passengers in the train, or with serious damage to railway property of the value exceeding Rs.25,00,000/- and any other accident which in the opinion of the Chief Commissioner of Railway Safety or Commissioner of Railway Safety requires the holding of an inquiry by the Commissioner of Railway Safety shall also be deemed to be a serious accident.
- 5) **Derailment:** Means off loading of wheel or wheels causing detention or damage to rolling stock / permanent way.
- 6) **Averted Collision:** An averted collision is a circumstance under which but for the vigilance shown by any person or persons, a collision would have occurred, either in the block section or within the station limits between two trains or between a train and an obstruction.
- 7) **Breach of Block Rules:** When a train enters a block section without any authority to proceed or with an improper authority to proceed, or is received on a blocked line not constituting an averted collision, or when it enters or is received on a wrong line at a station or a Catch/Slip siding or sand hump, it constitutes breach of Block Rules.
- 8) **Sabotage:** Means the criminal interference with any part of the working machinery of a Railway with the object of rendering it inoperative or any act intended to cause damage to railway property other than train wrecking or attempted train wrecking.
- 9) **Train Wrecking:** Means the willful obstruction of or tampering with the permanent way, works or rolling-stock, resulting in an accident to a train with or without loss of life or damage.
- 10) **Attempted Train Wrecking:** Means the willful obstruction of or tampering with the permanent way or works, structures, equipment or rolling-stock, which, if undetected would have resulted in an accident.
- 11) **Capsized Coach / Wagon:** Capsized coach/wagon is one in which all wheels are off the ground and it is resting on its side, either on the ground or against an obstruction.

Classification of Accidents

Accidents are classified under following heads:-

- a) Train Accidents.
 - b) Yard Accidents.
 - c) Indicative Accidents.
 - d) Equipment failures.
 - e) Unusual incidents.
- a) **Train accidents:** Train accident is an accident that involves a train. Train Accidents are classified as:
- i) Consequential train accidents
 - ii) Other train accidents.
- i) **Consequential train accidents:** Include train accidents having serious repercussion in terms of either one or many or all of the following:-
- loss of human life,
 - human injury,
 - loss of Railway property,
 - interruption to Rail traffic.

Train accident under following classification will be termed as consequential train accidents:-

Class A. Collisions:

- A 1. Collision involving a train carrying passengers, resulting in
 - i) loss of human life and/or grievous hurt and/or
 - ii) damage to Railway property of the value exceeding Rs.25,00,000 and/or
 - iii) interruption of any important through line of communication for at least 24 hours.
- A 2. Collision involving a train not carrying passengers, resulting in
 - i) loss of human life / grievous hurt and/or
 - ii) damage to Railway property of the value exceeding Rs.25,00,000 and/or
 - iii) interruption of any important through line of communication for at least 24 hours.
- A 3. Other collisions, i.e. collisions occurring in shunting, marshalling yards, loco yards and siding etc. but not involving a train.

Class B. Fire or Explosion in trains:

- B 1. Fire or Explosion in a train carrying passengers, resulting in
 - i) loss of human life and/or grievous hurt and/or
 - ii) damage to Railway property of the value exceeding Rs.25,00,000 and/or
 - iii) interruption of any important through line of communication for at least 24 hours.
- B 2. Fire or Explosion in a train not carrying passengers resulting in
 - i) loss of human life and/or grievous hurt and/or
 - ii) damage to Railway property of the value exceeding Rs.25,00,000 and/or
 - iii) interruption of any important through line of communication for at least 24 hours.
- B 3. Fire or Explosion in a train carrying passengers, not falling under B 1 above but loss to Railway property and/or interruption to traffic is more than the threshold value and/or resulting into detachment of rolling stock/stocks from the train and/or requiring relief engines.
- B 4. Fire or Explosion in a train not carrying passengers not falling under B 2 above but loss to Railway property and/or interruption to traffic is more than the threshold value and/or resulting into detachment of rolling stock/stocks from the train and/or requiring relief engines.
- B 5. Fire or explosion occurring in shunting, marshalling yards, loco yards and siding etc. involving rolling stock but not involving a train.

Class C. Trains running into road traffic, and/ or traffic running into trains at level crossings

- C 1. Trains carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings resulting into loss of human life and/or grievous hurt and/or damage to Railway property and/or interruption to traffic is more than the threshold value.
- C 2. Trains not carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings resulting into loss of human life and/or grievous hurt and/or damage to Railway property and/or interruption to traffic is more than the threshold value.
- C 3. Trains carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings resulting into loss of human life and/or grievous hurt and/or damage to Railway property and/or interruption to traffic is more than the threshold value.
- C 4. Trains not carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings resulting into loss of human life and/or grievous hurt and/or damage to Railway property and/or interruption to traffic is more than the threshold value.
- C 5. Shunting engine with or without vehicles or loose vehicles running into road traffic and/or road traffic running into shunting engine with or without, vehicles or loose vehicles, at level crossings.

Class D. Derailments

- D 1. Derailment of a train carrying passengers resulting in loss of human life and/or grievous hurt and/or damage to Railway property of the value exceeding Rs.25,00,000 and/or interruption of any important through line of communication for at least 24 hours.
- D 2. Derailment of a train not carrying passengers resulting in loss of human life and/or damage to Railway property of the value exceeding Rs.25,00,000 and/or interruption of any important through line of communication for at least 24 hours.
- D 3. Derailment of a train not carrying passengers not falling under D 2 above but loss to Railway property and/or interruption to traffic is more than the threshold value.
- D 4. Other derailments, i.e. derailments occurring in shunting, marshalling yards, loco yards and siding etc. but not involving a train.

ii) Other Train Accidents (or Class E Accidents)

- E 1. Train running over or against any obstruction including fixed structure other than included under class C resulting into loss of human life and/ or grievous hurt and/ or damage to Railway property and/or interruption to traffic is more than the threshold value.

- b) **Yard accidents:** All accidents that take place in a yard and do not involve a train are termed as yard accidents.
- c) **Indicative accidents:** In real term they are not accidents but are serious potential hazards and include all cases of train passing signal at danger, averted collision, breach of block rule.

Class F. Averted Collisions

- F 1. Averted collision between trains at least one of which is carrying passengers.
- F 2. Averted collision between a train carrying passengers and an obstruction.
- F 3. Averted collision between trains not carrying passengers.
- F 4. Averted collision between trains not carrying passengers and an obstruction.

Class G. Breach of Block Rules

- G 1. Train carrying passengers, entering a block section without any authority or without a proper authority to proceed.
- G 2. Train not carrying passengers entering a block section without any authority or without proper authority to proceed.
- G 3. Train received on a blocked line, not constituting an averted collision.
- G 4. Train received on or entering a wrong line at a station or Catch or Slip Siding or Sand Hump etc.

Class H. Train passing signal at danger

- H 1. Train carrying passengers running past a stop signal at danger without proper authority.
- H 2. Train not carrying passengers running past a Stop signal at danger, without proper authority.

- d) **Equipment failures:** These include all failure of Railway equipment i.e. failure of locomotive, rolling stock, permanent way, overhead wire, signaling and telecommunication equipment.

Class J. Failure of Engine and Rolling Stock

- J 1. Failure of engine hauling a train carrying passengers.
- J 2. Failure of engine hauling a train not carrying passengers or light engine.
- J 3. Parting of train carrying passengers
- J 4. Parting of a train not carrying passengers

- J 5. Failure of Rolling stock such as failure of tyres, wheels, axles, or braking apparatus etc on a passenger carrying train/leading to detachment of rolling stock/stocks from the train.
- J 6. Failure of Rolling stock such as failure of tyres, wheels, axles, or braking apparatus etc on train not carrying passenger/leading to detachment of rolling stock/stocks from the train.
- J 7. Failure of Rolling stock such as failure of tyres, wheels, axles, or braking apparatus etc on passenger carrying trains, not leading to detachment of rolling stock/stocks from the train.
- J 8. Failure of Rolling stock such as failure of tyres, wheels, axles, or braking apparatus etc. on train not carrying passenger, not leading to detachment of rolling stock/ stocks from the train.
- J 9. A train or a portion of a train running away, out of control.
- J 10. Poor brake power in a train but not covered in Class J 9.

Class K. Failure of Permanent Way

- K 1. Buckling of track
- K 2. Weld failure
- K 3. Rail fracture
- K 4. An unusually slack or rough running or heavy lurch experienced by drivers of running trains while passing over any length of permanent way leading blockage of communication.
- K 5. Failure of Railway tunnel, bridge, viaduct/formation/cutting and culvert etc.
- K 6. Damage to track of such a nature other than those covered under Class K 1 TO K 5 so as to render it temporarily unsafe for passage of trains or likely to cause delay to traffic for period above threshold value.

In above classification those cases detected during regular maintenance and not affecting train movement will not be counted.

Class L. Failure of Electrical equipment

- L 1. Snapping or any damage to OHE wire requiring switching of OHE for more than three minutes
- L 2. No tension in OHE for more than three minutes.
- L 3. Pantograph entanglement not covered up under J 1 and J 2.
- L 4. Defect in AC or other electrical equipment leading to detachment of a rolling stock/s from a train.

Class M. Failure of signaling and Telecommunication

- M 1. Failure of part or complete panel / RRI .
- M 2. Failure of Interlocking /track circuit or axle counter.
- M 3. Failure of Block Instruments.
- M 4. Failure of point machine and equipment.
- M 5. Failure of signal/point.
- M 6. Failure of control / station communication for more than fifteen minutes.
- M 7. Failure of station to station or station to level crossing gate communication for more than fifteen minutes.

- e) **Unusual incidents:** These include cases related to law and order but not resulting in train accidents and other incidents.

Class N. Train Wrecking

- N 1. Attempted wrecking of or sabotage to a train carrying passengers.
- N 2. Attempted wrecking of or sabotage to a train not carrying passengers.
- N 3. Attempted sabotage or tampering with track not involving any train.

Class P. Casualties

- P 1. Person or persons falling out of a running train resulting in loss of human life or grievous hurt.
- P 2. Person or persons run over or knocked down by a train resulting in loss of human life or grievous hurt.
- P 3. Person or persons falling out of a running train or knocked down by a train or engine or railway vehicle, not resulting in loss of human life or grievous hurt.

Class Q. Other incidents

- Q 1. Accidental or natural death or grievous hurt to any person whether passenger, railway employee or trespasser (or any other person), within railway premises (excluding railway quarters).
- Q 2. Murder or suicide in a train or within railway premises.
- Q 3. Robbery, attempted robbery, theft or attempted theft in Railway premises, including trains.
- Q 4. Fire or explosion within Railway premises but not involving trains.
- Q 5. Fire or explosion resulting in damage to Railway bridge and viaduct etc.
- Q 6. Blockade to train services due to agitation.

Class R. Miscellaneous

- R 1. Vehicle or vehicles running away.
- R 2. Train running over cattle.
- R 3. Floods, Breaches, and landslides, etc. resulting in interruption of an important through line of communication more than the threshold value.
- R 4. Other cases of Floods, breaches, landslides, etc. resulting in interruption to traffic.
- R 5. Any accident not included in the foregoing classifications.

Object of Inquiry

The object of an inquiry is,

- a) To ascertain the cause of accident: In addition to finding out the immediate cause, root cause of the accident should also be looked into.
- b) To fix responsibility for the accident: The responsibility should be fixed at higher level and should be specific i.e. primary, secondary and blameworthy. In fixing individual responsibility, if there are any extenuating circumstances, these should be mentioned
- c) To formulate proposals for preventing a recurrence: Practical feasibility of the recommendations should be borne in mind, the repercussion of the proposals should also be examined.
- d) To determine whether there was a general laxity in working to which the accident could also be attributed.
- e) To suggest improvement in system, practices and procedures.

Investigation and Inquiries

Following information should be obtained in case of accidents,

- a) Driver signal passing at danger:
 - i) In order to avoid any dispute later, the fact that a Driver has passed a signal at danger should be formally brought to his notice.
 - ii) The position of the signal and route should be recorded by the SM and signed by the SM, driver, guard and other witnesses, if available.
 - iii) The distance by which the train has passed the signal should be recorded in engine + bogie lengths and/or telegraph posts, and by measuring the actual distance in meters.
 - iv) In the night time, the brightness of the signals should be noted. The weather condition and visibility should also be recorded.

- v) If the Driver is required to use glasses, it should be checked whether he was in possession of them and using them.
- vi) Arrangement for testing brake power of the train shall be made at the nearest Loco Changing or C&W examination point.
- vii) Breathalyzer testing of the driver should be done.
- viii) The Driver must be relieved immediately and sent for medical examination.

b) Collision and averted collision:

- i) The position of the signal levers, point levers and block instruments should be immediately checked and noted down.
- ii) The Train Signal Register should be signed so as to indicate the last entry made and then seized.
- iii) If Line Admission Books are in force, these should be seized immediately noting in whose possession they were last.
- iv) If Line Badges are in force, the disposition of the Line Badges should be recorded.
- v) The position of the two trains or train and obstruction should be marked on the sleepers. The distance between the two should be measured in metres in case of averted collision. A rough sketch should be drawn showing their position vis-à-vis signals, station platform, turnouts and other fixed land marks.
- vi) Arrangement for testing brake power of the train shall be made at the nearest Loco Changing or C&W examination point.
- vii) Breathalyzer test of the driver should be done immediately and the driver shall be sent for further medical examination.

c) Derailments:

- i) Track measurements should be taken and a sketch should be prepared as per due procedures.
- ii) If the track has developed faults or cracks, they should be noted in a proper manner.
- iii) The wheels of the rolling stock and the locomotives should be examined for faults and be noted.
- iv) For Locomotives derailments, examination of wheel of the locomotives should be done. The electronic circuits should be checked for malfunction.
- v) The rail fittings and the point roddings including the locking arrangement should be examined. It should be seen whether there was any obstruction resulting in a gap in the points.
- vi) Marks on the rails and sleepers should be observed.
- vii) In cases of derailments during shunting operations, it should be noted as to who was actually supervising the shunting.
- viii) The position of the shunt signals, if any, point levers, point/ track indicators concerned should be recorded.

RAILWAY ACT, 1989
CHAPTER XV
PENALTIES AND OFFENCES

Section 145: Drunkenness or nuisance

If any person in any railway carriage or upon any part of a railway

- a) is in a state of intoxication; or
- b) commits any nuisance or act of indecency or uses abusive or obscene language; or
- c) willfully or without excuse interfered with any amenity provided by the railway administrations so as to affect the comfortable travel of any passenger, he may be removed from the railway by any railway servant and shall, in addition to the forfeiture of his pass or ticket, be punishable with

imprisonment which may extend to six months and with fine which may extend to five hundred rupees.

Provided that in the absence of special and adequate reasons to the contrary to be mentioned in the judgment of the court, such punishment shall not be less than

- a) a fine of one hundred rupees in the case of conviction for the first offence; and
- b) imprisonment of one month and a fine of two hundred and fifty rupees, in the case of conviction for second or subsequent offence.

Section 146: Obstructing railway servant in his duties

If any person willfully obstructs or prevents any railway servant in the discharge of his duties, he shall be punishable with imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

Section 150: Maliciously wrecking or attempting to wreck a train

(1) Subject to the provisions of sub – section, if any person unlawfully, -

- a) puts or throws upon or across any railway, any wood, stone or other matter or thing; or
- b) takes up, removes, loosens or displaces any rail, sleeper or other matter or things belonging to any railway; or
- c) turns, moves, unlocks or diverts any points or other machinery belonging to any railway; or
- d) makes or shows, or hides or removes, any signal or light upon or near to any railway; or
- e) does or causes to be done or attempts to do any other act or thing in relation to any railway, with intent or with knowledge that he is likely to endanger the safety of any person travelling on or being upon the railway, he shall be punishable with imprisonment for life, or with rigorous imprisonment for a term which may extend to ten years.

Provided that in the absence of special and adequate reasons to the contrary to be mentioned in the judgement of the court, where a person is punishable with rigorous imprisonment, such imprisonment shall not be less than

- a) three years in the case of a conviction for the first offence; and
- b) seven years, in the case of conviction for the second or subsequent offence.

(2) If any person unlawfully does any act or thing referred to in any of the clauses of sub – section (1)-

- a) with intent to cause the death of any person and the doing of such act or thing causes the death of any person; or
- b) with knowledge that such act or thing is so imminently dangerous that it must in all probability cause the death of any person or such bodily injury to any person as it likely to cause the death of such person, he shall be punishable with death or imprisonment for life.

Section 151: Damage to or destruction of certain railway properties

(1) If any person, with intent to cause, or knowing that he is likely to cause damage or destruction to any property of a railway referred to in sub – section (2), causes by fire, explosive substance or otherwise, damage to such property or destruction of such property, he shall be punishable with imprisonment for a term which may extend to five years, or with fine, or with both.

(2) The properties of a railway referred to in sub – section (1) are railway track, bridges, station buildings and installation, carriages or wagons, locomotives, signaling telecommunications electric traction and block equipments and such other properties as the Central Government being of the opinion that damage thereto or destruction thereof is likely to endanger the operation of a railway, may, by notification, specify.

Section 152: Maliciously hurting or attempting to hurt persons travelling by railway

If any person unlawfully throws or causes to fall or strike at against, into or upon any rolling stock forming part of a train, any wood, stone or other matter or thing with intent, or with knowledge that he is likely to endanger the safety of any person being in or upon such rolling stock or in or upon any other rolling stock forming part of the same train, he shall be punishable with imprisonment for life, or with imprisonment for a term which may extend to ten years.

Section 153: Endangering safety of persons travelling by railway by willful act or omission

If any person by any unlawful act or by any willful omission or neglect, endangers or causes to be endangered the safety of any person travelling on or being upon any railway, or obstructs or causes to be obstructed or attempts to obstruct any rolling stock upon any railway, he shall be punishable with imprisonment for a term which may extend to five years.

Section 154: Endangering safety of persons travelling by railway by rash or negligent act or omission

If any person in a rash and negligent manner does any act, or omits to do what he is legally bound to do, and the act or omission is likely to endanger the safety of any person travelling or being upon any railway, he shall be punishable with imprisonment for a term which may extend to one years, or with fine, or with both.

Section 156: Travelling on roof, step or engine of a train

If any passenger or any other person, after being warned by a railway servant to desist, persists in travelling on the roof, step or footboard of any carriage or on an engine, or in any other part of a train not intended for the use of passengers he shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to five hundred rupees, or with both and may be removed from the railway by any railway servant.

Section 160: Opening or breaking a level crossing gate

- (1) If any person, other than a railway servant or a person authorized in this behalf, opens any gate or chain or barrier set up on either side of a level crossing which is closed to road traffic, he shall be punishable with imprisonment for a term which may extend to three years.
- (2) If any person breaks any gate or chain or barrier set up on either side of a level crossing which is closed to road traffic, he shall be punishable with imprisonment for a term which may extend to five years.

Section 161: Negligently crossing unmanned level crossing

If any person driving or leading a vehicle is negligent in crossing an unmanned level crossing, he shall be punishable with imprisonment which may extend to one year.

Explanation: For the purpose of this section, negligence in relation to any person driving or leading a vehicle in crossing an unmanned level crossing means the crossing by such person -

- a) without stopping or caring to stop the vehicle near such railway crossing to observe whether any approaching rolling stock is in sight; or
- b) even while an approaching rolling stock is in sight.

Section 172: Penalty for intoxication

If any railway servant is in a state of intoxication while on duty, he shall be punishable with fine which may extend to five hundred rupees and when the performance of any duty in such state is likely to endanger the safety of any person travelling on or being upon a railway, such railway servant shall be punishable with imprisonment for a term which may extend to one year, or with fine, or with both.

Section 173: Abandoning train, etc., without authority

If any railway servant, when on duty, is entrusted with any responsibility connected with the running of a train, or of any other rolling stock from one station or place to another station or place, and he abandons his duty before reaching such station or place without authority or without properly handing over such train or rolling stock to another authorized railway servant, he shall be punishable with imprisonment for a term which may extend to two years, or with fine which may extend to one thousand rupees or with both.

Section 174: Obstructing running of train, etc

If any railway servant (whether on duty or otherwise) or any other person obstructs or causes to be obstructed or attempts to obstruct any train or other rolling stock upon a railways -

- a) by squatting or picketing or during any rail roko agitation or bandh, or
- b) by keeping without authority any rolling stock on the railway; or
- b) by tampering with, disconnecting or interfering in any other manner with its hose pipe or tampering with signal gear or otherwise, he shall be punishable with imprisonment for a term which may extend to two years, or with fine which may extend to two thousand rupees, or with both.

Section 175: Endangering the safety of persons

If any railway servant, when on duty, endangers the safety of any person

- a) by disobeying any rule made under this Act; or
- b) by disobeying any instruction, direction or order under this Act or the rules made thereunder; or
- c) by any rash or negligent act or omission, he shall be punishable with imprisonment for a term which may extend to two years, or with fine which may extend to one thousand rupees, or with both.

Section 176: Obstructing level crossing

If any railway servant unnecessarily

- a) allows any rolling stock to stand across a place where the railway crosses a public road on the level; or
- b) keeps a level crossing closed against the public, he shall be punishable with fine which may extend to one hundred rupees.

Section 181: Magistrate having jurisdiction under the Act

Notwithstanding anything contained in the Code of Criminal Procedure, 2 of 1974, no court inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the first class shall try an offence under this Act.

INDIAN PENAL CODE, 1860**Section 279: Rash driving or riding on a public way**

Whoever drives any vehicle, or rides, on any public way in a manner so rash or negligent as to endanger human life, or to be likely to cause hurt or injury to any other person, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

Section 304: Punishment for culpable homicide not amounting to murder

Whoever commits culpable homicide not amounting to murder shall be punished with section 104 [imprisonment for life], or imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine, if the act by which the death is caused is done with the intention of causing death, or of causing such bodily injury as is likely to cause death, or with imprisonment of either description for a term which may extend to ten years, or with fine, or with both, if the act is done with the knowledge that it

is likely to cause death, but without any intention to cause death, or to cause such bodily injury as is likely to cause death.

Section 304A: Causing death by negligence

Whoever causes the death of any person by doing any rash or negligent act not amounting to culpable homicide, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both.

Section 336: Act endangering life or personal safety of others

Whoever does any act so rashly or negligently as to endanger human life or the personal safety of others, shall be punished with imprisonment of either description for a term which may extend to three months, or with fine which may extend to two hundred and fifty rupees, or with both.

Section 337: Causing hurt by act endangering life or personal safety of others

Whoever causes hurt to any person by doing any act so rashly or negligently as to endanger human life, or the personal safety of others, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to five hundred rupees, or with both.

Section 338: Causing grievous hurt by act endangering life or personal safety of others

Whoever causes grievous hurt to any person to doing any act so rashly or negligently as to endanger human life, or the personal safety of others, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine which may extend to one thousand rupees, or with both.

MOTOR VEHICLE ACT, 1989
CHAPTER XIII
OFFENCES, PENALTIES AND PROCEDURES

Section 177: General provision for punishment of offences

Whoever contravenes any provision of this Act or of any rule, regulation or notification made thereunder shall, if no penalty is provided for the offence be punishable for the first offence with fine which may extend to one hundred rupees, and for any second or subsequent offence with fine which may extend to three hundred rupees.

Section 179: Disobedience of orders, obstruction and refusal of information

- 1) Whoever willfully disobeys any direction lawfully given by any person or authority empowered under this Act to give such direction, or obstructs any person or authority in the discharge of any functions which such person or authority is required or empowered under this Act to discharge, shall, if no other penalty is provided for the offence be punishable with fine which may extend to five hundred rupees.
- 2) Whoever, being required by or under this Act to supply any information, willfully withholds such information or gives information which he knows to be false or which he does not believe to be true, shall, if no other penalty is provided for the offence, be punishable with imprisonment for a term which may extend to one month, or with fine which may extend to five hundred rupees, or with both.

Section 183: Driving at excessive speed, etc.

- 1) Whoever drives a motor vehicle in contravention of the speed limits referred to in Section 112 (*Limits of Speed*) shall be punishable with fine which may extend to four hundred rupees, or, if having been previously convicted of an offence under this sub-section is again convicted of an offence under this sub-section, with fine which may extend to one thousand rupees.

- 2) Whoever causes any person who is employed by him or is subject to his control in driving to drive a motor vehicle in contravention of the speed limits referred to in Section 112 shall be punishable with fine which may extend to three hundred rupees, or, if having been previously convicted of an offence under this sub-section, is again convicted of an offence under this sub-section, with fine which may extend to five hundred rupees.
- 3) No person shall be convicted of an offence punishable under sub-section (1) solely on the evidence of one witness to the effect that in the opinion of the witness such person was driving at a speed which was unlawful, unless that opinion is shown to be based on an estimate obtained by the use of some mechanical device.
- 4) The publication of a time table under which or the giving of any direction that any journey or part of a journey is to be completed within a specified time shall, if in the opinion of the court it is not practicable in the circumstances of the case for that journey or part of a journey to be completed in the specified time without contravening the speed limits referred to in Section 112 be prima facie evidence that the person who published the time table or gave the direction has committed an offence punishable under sub-section (2).

Section 184: Driving dangerously

Whoever drives a motor vehicle at a speed or in a manner which is dangerous to the public, having regard to all the circumstances of the case including the nature, condition and use of the place where the vehicle is driven and the amount of traffic which actually is at the time or which might reasonably be expected to be in the place, shall be punishable for the first offence with imprisonment for a term which may extend to six months or with fine which may extend to one thousand rupees, and for any second or subsequent offence if committed within three years of the commission of a previous similar offence with imprisonment for a term which may extend to two years, or with fine which may extend to two thousand rupees, or with both.

Section 185: Driving by a drunken person or by a person under the influence of drugs

Whoever, while driving, or attempting to drive, a motor vehicle,

- a) has, in his blood, alcohol exceeding 30 mg per 100 ml of blood detected in a test by a breath analyzer, or
- b) is under the influence of a drug to such an extent as to be incapable of exercising proper control over the vehicle,

shall be punishable for the first offence with imprisonment for a term which may extend to six months, or with fine which may extend to two thousand rupees, or with both; and for a second or subsequent offence, if committed within three years of the commission of the previous similar offence, with imprisonment for a term which may extend to two years, or with fine which may extend to three thousand rupees, or with both.

Section 186: Driving when mentally or physically unfit to drive

Whoever drives a motor vehicle in any public place when he is to his knowledge suffering from any disease or disability calculated to cause his driving of the vehicle to be a source of danger to the public, shall be punishable for the first offence with fine which may extend to two hundred rupees and for a second or subsequent offence with fine which may extend to five hundred rupees.

Section 187: Punishment for offences relating to accident

Whoever fails to comply with the provisions of clause (c) of sub-section (1) of Section 132 (*Duty of driver to stop in certain cases*) or Section 133 (*Duty of owner of motor vehicle to give information*) or Section 134 (*Duty of driver in case of accident and injury to a person*) shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to five hundred rupees, or with both or, if having been previously convicted of an offence under this section, he is again convicted of an offence under this section, with imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

Section 188: Punishment for abetment of certain offences

Whoever abets the commission of an offence under Section 184 or Section 185 or Section 186 shall be punishable with the punishment provided for the offence.

Section 189: Racing and trials of speed

Whoever without the written consent of the State Government permits or takes part in a race or trial of speed of any kind between motor vehicles in any public place shall be punishable with imprisonment for a term which may extend to one month, or with a fine which may extend to five hundred rupees, or with both.

Section 190: Using vehicle in unsafe condition

- 1) Any person who drives or causes or allows to be driven in any public place a motor vehicle or trailer while the vehicle or trailer has any defect, which such person knows of or could have discovered by the exercise of ordinary care and which is calculated to render the driving of the vehicle a source of danger to persons and vehicles using such place, shall be punishable with fine which may extend to two hundred and fifty rupees or, if as a result of such defect an accident is caused causing bodily injury or damage to property, with imprisonment for a term which may extend to three months, or with fine which may extend to one thousand rupees, or with both.
- 2) Any person who drives or causes or allows to be driven, in any public place a motor vehicle, which violates the standards prescribed in relation to road safety, control of noise and air-pollution, shall be punishable for the first offence with a fine of one thousand rupees and for any second or subsequent offence with a fine of two thousand rupees.
- 3) Any person who drives or causes or allows to be driven, in any public place a motor vehicle which violates the provisions of this Act or the rules made there under relating to the carriage of goods which are of dangerous or hazardous nature to human life, shall be punishable for the first offence which may extend to three thousand rupees, or with imprisonment for a term which may extend to one year, or with both, and for any second or subsequent offence with fine which may extend to five thousand rupees, or with imprisonment for a term which may extend to three years, or with both.

Section 191: Sale of vehicle in or alteration of vehicle to condition contravening this Act

Whoever being an importer of or dealer in motor vehicles, sells or delivers or offers to sell or deliver a motor vehicle or trailer in such condition that the use thereof in a public place would be in contravention of Chapter VII (*Construction, Equipment And Maintenance Of Motor Vehicles*) or any rule made there under or alters the motor vehicle or trailer so as to render its condition such that its use in a public place would be in contravention of Chapter VII or any rule made there under shall be punishable with fine which may extend to five hundred rupees.

Provided that no person shall be convicted under this section if he proves that he had reasonable cause to believe that the vehicle would not be used in a public place until it had been put into a condition in which it might lawfully be so used.

Section 194: Driving vehicle exceeding permissible weight

- 1) Whoever drives a motor vehicle or causes or allows a motor vehicle to be driven in contravention of the provisions of Section 113 (*Limits of weight and limitations on use*) or Section 114 (*Power to have vehicle weighed*) or Section 115 (*Power to restrict the use of vehicles*) shall be punishable with minimum fine of two thousand rupees and an additional amount of one thousand rupees per tonne of excess load, together with the liability to pay charges for off-loading of the excess load.

- 2) Any driver of a vehicle who refuses to stop and submit his vehicle to weighing after being directed to do so by an officer authorized in this behalf under Section 114 or removes or causes the removal of the load or part of it prior to weighing shall be punishable with fine which may extend to three thousand rupees.

Section 195: Imposition of minimum fine under certain circumstances

- 1) Whoever having been convicted of an offence under this Act or the rules made there under commits a similar offence on a second or subsequent occasion within three years of the commission of the previous offence, no court shall, except for reasons to be recorded by it in writing, impose on him a fine of less than one-fourth of the maximum amount of the fine imposable for such offence.
- 2) Nothing in sub-section (1) shall be construed as restricting the power of the court from awarding such imprisonment as it considers necessary in the circumstances of the case not exceeding the maximum specified in this Act in respect of that offence.

Section 198: Unauthorized interference with vehicle

Whoever otherwise than with lawful authority or reasonable excuse enters or moves any stationery motor vehicle or tampers with the brake or any part of the mechanism of a motor vehicle shall be punishable with fine which may extend to one hundred rupees.

Section 201: Penalty for causing obstruction to free flow of traffic

- 1) Whoever keeps a disabled vehicle on any public place, in such a manner, so as to cause impediment to the free flow of traffic, shall be liable for penalty up to fifty rupees per hour, so long as it remains in that position.
Provided that the vehicle involved in accidents shall be liable for penalty only from the time of completion of inspection formalities under the law.
Provided further that where the vehicle is removed by a Government agency, towing charges shall be recovered from the vehicle owner or person in-charge of such vehicle.
- 2) Penalties or towing charges under this section shall be recovered by such officer or authority as the State Government may, by notification in the Official Gazette, authorize.

Section 202: Power to arrest without warrant

- 1) A police officer in uniform may arrest without warrant any person who in his presence commits an offence punishable under Section 184 or Section 185 or Section 197 (*Taking vehicle without authority*).
Provided that any person so arrested in connection with an offence punishable under Section 185 shall, within two hours of his arrest, be subjected to a medical examination referred to in Sections 203 (*Breath Tests*) and 204 (*Laboratory Tests*) by a registered medical practitioner failing which he shall be released from custody.
- 2) A police officer in uniform may arrest without warrant any person, who has committed an offence under this Act, if such person refuses to give his name and address.
- 3) A police officer arresting without warrant the driver of a motor vehicle shall if the circumstances so require take or cause to be taken any steps he may consider proper for the temporary disposal of the vehicle.