

3.62. Placing of detonators in case of obstruction.—

(1) Whenever in consequence of an obstruction of a line, it is necessary for a railway servant to stop approaching trains, he shall proceed, plainly showing his Stop hand signal, to a point 400 metres from the obstruction and place on the line one detonator and then proceed to a point 800 metres from the obstruction and place on the line three detonators, about 10 metres apart, at such place:

Provided that on the broad gauge, the first detonator shall be placed at 600 metres and three detonators at 1200 metres from the obstruction about 10 metres apart from each other.

(2) If the said railway servant is recalled before the obstruction is removed, he shall leave down three detonators and on his way back, pick up the intermediate detonator.

3.63. Replacement of detonators on the line.—

Every railway servant placing detonators on the line shall see that they are, when necessary, replaced immediately after a train has passed over them.

3.64. Knowledge and possession of detonators.—

(1)(a) All Station Masters, Guards, Loco Pilots, Gang mates, Gatemen and all other railway servants on whom this duty is laid by the Railway Administration, shall keep a stock of detonators.

(b) The Railway Administration shall be responsible for the supply, renewal, periodical testing and safe custody of such detonators, and for ensuring that their use is properly understood.

(2) Every railway servant concerned with the use of detonators shall have a correct knowledge of their use and keep them ready for immediate use.

(3) Every railway servant shall see that the railway servants in his charge concerned with the use of detonators have a correct knowledge of their use.

S. R. 3.64.1 Stock of detonators

(1) A case containing 10 detonators shall form part of the equipment, when on duty, of every Guard, of every Loco Pilot on the footplate, of every Gangmate, of every Gateman, of every Bridge Guard, of every Cutting Guard, of every Patrolman and of every push trolley, motor trolley and lorry and 8 detonators for every Key man.

(2) The DRM shall prescribe the number of detonators which shall be kept in stock at station and the minimum number below which the stock shall not be allowed to fall.

(3) The DRM shall prescribe the number of detonators which shall be kept in stock in each PWI's office and Running Sheds respectively and also the minimum number below which the stock shall not be allowed to fall.

(4) Station Masters, Chief Crew Controllers (CCC) and PWIs are responsible for ensuring that the stock of detonators is never allowed to fall below the minimum.

S.R. 3.64.2. Supply of Detonators.

- (1) Station Masters will supply detonators to Guards headquartered at their stations and to Gatemen working under their control.
- (2) PWIs shall supply detonators to Gangmates, Keymen, Gatemen (not covered in 2.1 above), Bridge Guards, Cutting Guards and Patrolmen.
- (3) CCC will supply detonators to Loco Pilots.
- (4) The users of push trolley, cycle /moped trolley, motor trolley, lorries shall arrange for the supply of detonators either direct from the DRM or through the Station Masters, PWIs or CCCs of their headquarter station, as may be convenient.

S.R. 3.64.3. Storage of detonators.

- (1) Detonators shall be carefully handled as they are liable to explode if roughly handled.
- (2) Detonators shall be kept in tin cases specially supplied and they shall be stored in dry places and not left in contact with the brick walls, damp wood, chloride of lime or other disinfectants nor exposed to dampness or steam or other vapors.
- (3) The month and year of manufacture is shown on the label outside each case and is also stamped on each detonator. Detonators shall be used in the order of the dates stamped on them, those of the oldest date being always used first. To facilitate ready withdrawal in this sequence they should be stored also accordingly.

S.R. 3.64.4. Use of detonators.

- (1) For use, a detonator shall be placed on the centre of the head of the rail with the label or brand of the detonator upwards, and shall be securely fastened to the rail by bending the clasps attached with the detonators, round the upper flange of the rail.
- (2) Station Masters, CCCs and PWIs are responsible for ensuring that the detonators in possession of the railway servants under them are tested as prescribed under the rules and that the staff know how and when to use them. For Gatemen within station limits, this responsibility will lie with the Station Master or Traffic Inspector of the section. Such staff as are expected to use the detonators should be tested once in three months by the Inspecting Officials and Senior Subordinates in regard to their knowledge of use of detonators.
- (3) Each Station Master, CCC and PWI will maintain a register of receipts, use and testing of detonators in respect of railway staff to whom the detonators were issued by him.

S.R. 3.64.5. Testing of Detonators.

- (1) At stations, Loco Sheds, etc., where stocks of detonating signals are kept for issue to Guards, Loco Pilots, Fog signalmen or other railway servants, Station Masters, the CCC or other railway persons in charge of such stock shall test at least one detonator from each tin case issued to the staff. The deficiency in each of these cases should be made up by a detonator or detonators from another tin case from which one detonator has been tested.

- (2) Traffic Inspectors, Station Masters, CCCs and PWIs are responsible to ensure that the detonators in possession of railway servants within their jurisdiction are tested once in 12 months.
- (3) The normal life of detonators manufactured during 2010 and thereafter is 5 years reckoned from the year of manufacture. The life of the detonators can be extended further for a maximum of 3 more years, provided that detonators which are more than 5 years old are effective. For this purpose, 2 detonators of each batch/lot should be tested at the end of 5 years and if the result of these tests are satisfactory, life of the detonators of that batch should be extended by one more year, on expiry of which similar tests should be conducted annually to extend the life of the detonators of that particular batch/lot up to a maximum of 8 years from the year of manufacture.
In case the results are not satisfactory, they should be destroyed. (The normal life of detonators manufactured prior to the year 2010 to be reckoned as 7 years and can be extended thereafter by conducting the tests for their effectiveness).
- (4) Detonators bearing any sign of rust on the surface or appearing unsatisfactory in any way or those failing to explode during tests or in actual working shall be promptly returned to the issuing officer for replacement.
- (5) While testing detonators from a tin case, the one which is the oldest as regards the date of manufacture should be used.
- (6) Detonators shall be tested under an empty wagon moving at 8 to 11 KMPH. The empty wagon shall be propelled by a locomotive. Tests shall not be carried out by an official lower in rank than a Traffic Inspector, PWI, Loco Inspector and CCC. StationMasters at Guard's headquarters station are, however, authorized to test detonators in their charge or issued by them. Care shall be taken to ensure that the test is not conducted in a crowded locality or near a level crossing where splinters from detonators may cause injury.
- (7) Excepting the crew of the locomotive employed in the test, no person shall be allowed to remain within a radius of 45 metres of the detonator which is being tested. The engine crew shall also keep themselves well within the cab while passing over the detonator. The official in-charge of the testing operation shall before commencement of the operation, be responsible for posting sufficient men to ensure that no person encroaches upon the 45 metres safety radius until the test is completed.
- (8) The staff shall, while observing the safety radius of 45 metres laid down in Para 5.7 above, place themselves as far as possible in rear of the locomotive or train or wagon passing over the detonators as it has been found in practice that splinters from detonators, seldom fly in a direction towards the rear of the wheel which explodes them.
- (9) A record of the number of detonators tested as also the results of test shall be maintained in a special register kept for the purpose at the place of testing.
- (10) After the test is completed, results of the tests shall be communicated to the issuing officer of the detonators, by the official conducting the test.
- (11) The staff in possession of the detonators shall not make any improper use of them.

S.R. 3.64.6. Disposal of shelf life completed detonators.

After completion of shelf life, detonators shall be destroyed by one of the following methods:

- (1) By soaking them in light mineral oil for 48 hrs and then throwing them one by one into fire with due precautions.
- (2) By burning them in incinerator.
- (3) By detonating them under wagon during shunting operations.
- (4) By throwing them in deep sea.

The destruction of time-barred detonators should be done in the presence of Traffic Inspector/Station Master/PWI who should ensure that every care is taken to see that splinters of detonators do not cause any injury to life and property. They should not be buried or thrown in places from where they could be recovered.

G. Signals to warn incoming train of danger ahead.**3.65. The signals to be used to warn the incoming train of an obstruction shall be a red flashing hand signal lamp at night or a red flag during day.**

S. R. 3.65. A red flashing hand signal lamp at night or red flag during day shall be exhibited to warn the incoming train of an obstruction.

3.66. Use of warning signals.—

When it becomes necessary to protect an obstruction in a block section, a signal may be used, as prescribed by special instructions under rule 3.65, while the railway servant proceeds to place detonators.

S.R.3.66.1. The Staff provided with cell operated flashing Hand Signal Lamps should carry one set of spare cells.

3.66.1.1. Recharging facility shall be provided at suitable places at stations/cabins/gate lodges for charging rechargeable flashing Hand signal lamps.

3.67. Knowledge and possession of warning signals.—

- (1)(a) All concerned railway servants on whom this duty is laid by the Railway Administration shall keep a stock of such signal as may be prescribed by special instructions under rule 3.65;
 - (b) The Railway Administration shall be responsible for the supply, renewal and safe custody of such signals as may be prescribed by special instructions under rule 3.65 and for ensuring that their use is properly understood;
 - (c) The Railway Administration shall supply every Guard, Loco Pilot, Patrolman and Gateman working on the Double or Multiple line, Ghat, Suburban or Automatic Block Territories with such signal as may be prescribed by special instructions under rule 3.65;
- (2) Every railway servant concerned with the use of signals as prescribed by special instructions under rule 3.65, shall have a correct knowledge of their use and keep them ready for immediate use.