

**GOVERNMENT OF INDIA  
RAILWAYS  
LOK SABHA**

STARRED QUESTION NO:259  
ANSWERED ON:24.07.2014  
ANTI COLLISION DEVICES  
Rudy Shri Rajiv Pratap

**Will the Minister of RAILWAYS be pleased to state:**

- (a) whether the Railways have developed Anti-Collision Devices (ACDs) to check train accidents and initiated process for their installation;
- (b) if so, the details of ACDs developed and trains on which the devices have been installed/likely to be installed, zone-wise;
- (c) whether there has been delay in installation of ACDs, if so, the details thereof; and
- (d) the steps taken by the Railways to expedite the matter?

**Answer**

MINISTER OF RAILWAYS (SHRI D.V. SADANANDA GOWDA)

(a) to (d): A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF STARRED QUESTION NO. 259 BY SHRI RAJIV PRATAP RUDY TO BE ANSWERED IN LOK SABHA ON 24.07.2014 REGARDING ANTI COLLISION DEVICES.

(a) Yes, Madam.

(b) & (c) Development and deployment of Anti-Collision Device (ACD) was taken up by Konkan Railway Corporation Limited (KRCL) as a pilot project on 1736 Route kilometers and 548 locomotives on Northeast Frontier Railway (NFR) and it was operationalised in the year 2006. Technical and operational problems have been experienced in the functioning of ACD on NFR. Major problem is of unwarranted brakings which has adverse impact on train running.

Research & Development (R&D) and Engineering efforts in resolving these technical and operational problems have been undertaken since its deployment on NFR. KRCL developed improved version 1.1.2 of ACD which was validated by Electronic Test & Development Centre (ETDC), Chennai and the same has been implemented on all Divisions of NFR. However, unwarranted brakings still continue to exist.

To deploy the system on the main line sections having multiple lines / electrified routes, KRCL developed ACD version 2.0 with revised specifications and design configuration. Trials of ACD version 2.0 were conducted jointly by KRCL, Research Design and Standard Organization (RDSO) and NFR on section Pattabiram – Arakkonam on Chennai Division of Southern Railway during 2010-11. A large number of complex operational and technical problems were experienced during the trials on Southern Railway which could not be fully resolved by KRCL due to design limitations of ACD. Due to this, development of ACD version 2.0 has been put on hold by KRCL and further proliferation of ACD on other Zonal Railways is not contemplated.

(d) To overcome major problems noticed in ACD due to its dependence on GPS for location, need for a number of mid-section repeaters which are prone to theft and vandalism and also being a single vendor system, an alternative system termed as Train Collision Avoidance System (TCAS) is being developed indigenously by RDSO in association with three Indian Vendors. TCAS has features of Automatic Train Protection and Anti-collision. Extended field trials with multi vendor, interoperability features are in progress by RDSO, on 250 Km section of Secunderabad Division, South Central Railway.

Initial rounds of extended field trials were conducted by RDSO during 2013-14 in a sub section of the above identified section wherein Anti-Collision and Automatic Train Protection features of TCAS were successfully demonstrated.