Workshop on "Wheel Slide Protection" System of LHB Coaches

As per the decision taken in the 14th CMG, a workshop on WSP maintenance was conducted on 27/06/16 and 28/16/16 at IRIMEE for officers and supervisors. There were sixty seven participants representing RDSO and 14 zonal railways and consisted of 15 posted officers (six nominated exclusively for this workshop and 9 group B officers attending 10 week induction course at IRIMEE), 20 IRSME Probationers and 32 posted Supervisors.

The workshop started out with a brief introduction of the WSP system, wherein the need for such a system and its control logic was explained. This was followed by a presentation by a representative from M/s Knorr Bremse, one of the OEMs of the WSP fitted in LHB coaches. This presentation contained a detailed description of the various mechanical and electronic components of the system. The live working model of the FIAT bogie fitted with WSP system was used to demonstrate the layout of components as well the functioning Field officers and supervisors shared their experience regarding the various problems/failures encountered and maintenance practices followed in order to address these issues.

The actionable points noted during the workshop are as under:

S. No.	Item of discussion	Action to be taken	Responsibility
1.	Some of the depots reported that they have observed that the movement of the brake caliper arm is not free. They have reported that that the brake caliper center pin does not rotate freely when turned by hand. Depot staff remove these pins, clean and grease them as well as the bushes and re-fit them. This is a cumbersome process requiring about 1 hour per brake caliper. 	This aspect needs to be examined by other maintenance depots. RDSO may also study the issue and advise further course of action.	CRSEs of all zonal railways and ED/Carriage RDSO
2.	Some depots have reported accumulation of dust in the exhaust port of dump valve, leading upto the diaphragm. This leads to air leakage via the exhaust port even though the dump valve may be in "apply" or "hold" mode. Depots are overhauling the	All depots may check whether there is any leakage from the exhaust port of the dump valve during primary examination. RDSO may also	CRSEs of all zonal railways and ED/Carriage RDSO

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	dump valve to prevent/tackle this phenomenon.	study the issue and advise further course of action.	
3.	Depots expressed the need for downloading data from the system.	As per the agenda for the 15th CMG circulated by RDSO, the OEMs have expressed their inability to supply free of cost WSP software.	CRSEs of all zonal railways and ED/Carriage RDSO
4.	Some of the participants pointed out that the parking brake indication in brake vans gives a false indication of "brakes applied" even if the same is actually released. This is causing confusion amongst Guards.	Though this aspect is not specifically related to the WSP system, there is a need to educate the Guards on the subject.	CRSEs of all zonal railways
5.	Some of the depots pointed out that the display panel for the WSP system in Non AC Coaches is located in the underframe of the coach. This is found inconvenient.	The possibility of standardizing the location of the WSP indication as per the layout of AC coaches may be examined.	ED/Carriage RDSO, CDE/RCF
6.	Many depots expressed the need for e test kit to check the functioning of the WSP system in dynamic condition, while in pit line. NDLS depot indicated that they had been supplied a small battery operated tester to check the functioning of a single speed sensor. PE Liluah Workshop informed that a test kit consisting of a motor driven phonic wheel on which a coach speed sensor is fitted is used in Liluah Workshop to test the functioning of the dump valve of CDTS during POH of LHB coaches.	A test kit may be developed to test the functioning of the WSP system with respect to all four parameters , viz. V_1 , V_2 , A_1 , A_2. The schedule during which schedule this needs to be checked should also be decided.	ED/Carriage RDSO, CDE/RCF
7.	Some of the Depots expressed doubts regarding the concentricity of the phonic wheel and the axle box cover. They suspected that lack of concentricity between these two components could result in improper air gap being maintained between the speed sensor and the phonic wheel. 	The dimensions of the phonic wheel, control arm and axle box cover should be inspected before assembly in PUs/Workshops to ensure that uniform air gap is maintained between sensor and phonic wheel.	CMEs of RCF/ICF and All CWMs