**REVIEW ANALYSIS OF INDIAN STANDARD**

1. **Sectional Committee No. & Title:** TED11- Automotive Electrical Equipment and Instruments Sectional Committee
2. **IS No:** IS 13931 (Part1)
3. **Title:** Automotive vehicles - Stoplight switches: Part 1 Specification
4. **Date of review:** 03 February 2024
5. **Review Analysis**
6. **Status of standard(s), if any from which assistance had been drawn in the formulation of this IS.**

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| **Standard**  **(No. & Title)** | **Whether the standard has since been revised** | **Major changes** | **Action proposed** |
| Nil | Not applicable | Not applicable | Not applicable |

1. **Status of standards referred in the IS**

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| --- | --- | --- | --- |
| **Referred standards**  **(No. & Title)** | **IS No. of this standards since revised** | **Changes that are of affecting the standard under review** | **Action proposed** |
| IS 13931 (Part2) | IS 13931 (Part 2) : 1993, Amd.1 | Proposed change inTest for voltage drop: As per international OEMs,  80mV (before endurance test) change to 200mV (before endurance test)  120mV (after endurance test)  change to 300mV (after endurance test) (for rated Voltage of 12 V ; To be decided for rated Voltage of 24 V) | **Amend clause 7.6** Test for Voltage Drop in IS 13931 (Part1) as follows:  The voltage drop between the terminals after the test carried out in accordance with 4.5 of IS 13931 ( Part 2 ) : 1993 with rated load shall not exceed ~~80mV~~200mV before the endurance test and ~~120mV~~300mV after the endurance test. |
|  |  | Proposed change in Endurance Test of switch: Internationally OEMS require endurance cycles as 1.0 million (10,00,000) as against 5,00,000 mentioned in Standard (for rated Voltage of 12 V ; To be decided for rated Voltage of 24 V) | **Amend clause 7.12**  Endurance Test in IS 13931 (part1) as follows:  After being tested as per 4.12 of IS 13931 ( Part 2 ) : 1993 Amd. 1 the switches shall meet the requirements of performance test as per ~~7.4.1~~ 7.5.1. The voltage drop shall not exceed ~~120 mV~~ 300mV. There shall not be excessive play and the plunger movement shall be free. |
| IS 10250 : 1982 | same | Nil | Nil |

1. **Any other standards available related to the subject & scope of the standard being reviewed (International/regional/other national/association/consortia, etc. or of new or revision of existing Indian Standard)**

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| **Standard**  **(No. & Title)** | **Provisions that could be relevant while reviewing the IS** | **Action proposed** |
| SAE J249\_198806 (1988) | Nil | No action |

1. **Technical comments on the standard received, if any**

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| **Source** | **Clause of IS** | **Comment** | **Action proposed** |
| Not yet received | Nil | Nil | No Action |

1. **Information available on technical developments that have taken place (on product/processes/practices/use or application/testing/input materials, etc)**

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| **Source** | **Development** | **Relevant clause of the IS under review that is likely to be impacted**  **(Clause & IS No.)** | **Action proposed** |
| Smart switch likely to get evolved to align the advanced Brake systems like EBS, AEBS | | | |

1. **Issues arising out of changes in any related IS or due to formulation of new Indian Standard**

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| **Related IS and its Title**  **(revised or new)** | **Provision in the IS under review that would be impacted & the clause no. or addition of new clause/provision** | **Changes that may be necessary in the Standards under review** | **Action proposed** |
| IS 13931 (Part 2) | Changes to be done in IS 13931 (Part1) as listed at Sr. no. 5 (ii) | | |

1. **Any consequential changes to be considered in other IS**

|  |  |
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| **Related IS to get impacted** | **Requirements to be impacted** |
| IS 4373 : 1967. Requirements for hydraulically operated switches | Nil |

1. **Any other observation:**

Nil

1. **Recommendations:**

Standard IS 13931 (Part 1) needs to be updated as listed above (Amendment)

Review By: M/S Jai Ushin, ACMA, Date: 20/02/2024