

ISC (In-Service Conformity) and IUPR (In-Use Performance Ratio) Period:

After the granting of type-approval for a family the manufacturer shall perform ISC and IUPR testing on this family within 18 months from the date of first registration of a vehicle fitted with an engine from that family or from 1st April 2023 whichever is later. In case of multistage type-approval first registration means first registration of a completed vehicle. The testing shall be repeated at least every two years for each family periodically on vehicles over their useful life.

ISC

The conformity of in-service vehicles or engines of a family shall be demonstrated by testing vehicles on the road operated over their normal driving patterns, conditions and payloads. The in-service conformity test shall be representative for vehicles operated on their real driving routes, with their normal load and with the usual professional driver of the vehicle.

Pollutant	CF _{pollutant}
NO _x	1 + margin ⁽³⁾ NO _x With margin NO _x = 0.43
PN ⁽¹⁾	1 + margin ⁽³⁾ PN With margin PN = 0.5
CO ⁽²⁾	-

Parameter	Maximum Allowed Conformity Factor (CF)
CO	1.5
THC ⁽¹⁾	1.5
NMHC ⁽²⁾	1.5
CH ₄ ⁽²⁾	1.5
NO _x	1.5

IUPR

The in-use performance ratio (IUPR) of a specific monitor (m) or group of monitors (g) of the OBD system shall be calculated by the following formula:

IUPR = Numerator / Denominator

where

'Numerator' means the numerator of a specific monitor (m) or group of monitors (g) and is a counter indicating the number of times a vehicle has been operated in such a way that all monitoring conditions necessary for that specific monitor (m) or group of monitors (g) to detect a malfunction have been encountered;

and

'Denominator' means the denominator of a specific monitor (m) or group of monitors (g) and is a counter indicating the number of vehicles driving cycles that are of relevance to that specific monitor (m) or group of monitors (g) [or, "in which events occur that are of relevance to that specific monitor."].

The in-use performance ratio (IUPR_g) of a group g of monitors on board of a vehicle is equivalent to the lowest IUPR value of specific monitors in that group.

The procedure and requirements prescribed in AIS 137 Part 4 is followed for vehicles with GVW exceeding 3500 kg