Remedy from bogged down of engine speed at low Idle

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Application: Locomotive Engine

Effected Governor: PGE & PGEV

Description: It was noticed sometimes that low idle speed of Locomotive engine was bogged down automatically from it’s set point. It may be decreased by 10 -15 rpm or may ultimately be stopped the Engine.

One reason of this phenomenon is due to marginal engine lube oil pressure. Lube oil pressure supposed to be higher than the maximum tolerance of lube oil shutdown pressure. It is noticed that if engine lube oil pressure is interface with Governor maximum lube oil shutdown pressure, Governor speed setting servo piston moved up in decrease speed direction slowly and that caused the bogged down of the engine speed. This phenomenon may not be true for all Governors and perhaps for the implication of limit & fit theory of different parts in Governor. But in general, Locomotive lube oil pressure should be sufficient high than the maximum tolerable lube oil pressure of the Governor so that Engine lube oil pressure must not be interference with Governor maximum lube oil pressure. One more important aspect is, Engine system record lube oil pressure far from Governor and pressure may be dropped due to the transmission leakage between pressure gauge/probe and Governor, Leakage through oil ring, seal, connector, Engine protective device etc which may not be reflected in the Engine lube oil pressure measuring equipment.

Things to be remembered that low speed alone cannot be dropped and it is not a Governor defect. Prime suspect should be marginal engine lube oil pressure.