

TRO DRIVE NO. 07 /2024

Sub : Drive for fire prevention of electric and diesel locomotives

Ref. : CEE/OP Instruction no. 09/2024 dated 14.06.2024.

In reference with the above TRO drive is launched from 15.06.2024 to 14.07.2024 for prevention of electric and diesel locomotive. All CLIs/Supervisors & to counsel all running staff on the items related to crew. All Trip Shed in-charges to implement the guidelines pertaining to fire safety. All loco running staff and maintenance staff should be given training for swift and correct operation of fire extinguishers.

Some of the important items to be checked in Trip Shed are as under :

For Electric Loco :

1. BA/TK panel (EPM contactors, CTF reversers)-Contactors should be checked for flash over.
2. General (Locomotive body) All the drain pipes meant for draining out of excess compressor oil, transformer oil should be maintained in proper condition and checked during every inspection of locomotives
3. Auxiliary motors Even a slight of leakage from MPH should not be permitted for long In service.
4. Under-frame and other equipments-
 - a. The under frame brake rigging items should be kept in cleaned condition, specially, in the vicinity of brake blocks and wheels. There should not be accumulation of polythene items, paper and animal dung to avoid smoke emission due to likely sparks from brake blocks or otherwise
 - b. Traction motor body, junction boxes also should be kept in cleaned condition every inspection
 - c. The removal of muck and foreign materials from the cable carrying ducts, junction box in the under frame of locomotive should be ensured during AOH, IOH and during lifting of locomotive.
 - d. Cleaning of panto foot insulators, roof line insulators, insulators of DJ/ VCB Lightning arrestor, bushing portion on the roof of the locomotive should be kept in cleaned condition during every inspection of locomotive. The accumulation or presence of any form of foreign material should be immediately attended.
5. Transformer & GR –Working of PHGR should be ensured in every inspection of locomotives.
6. Relays – Ensure that rating of CCPT fuse has been reduced to 10 amps from 16 Amps

For Diesel locos :

- (a) No leakage of lube oil and fuel oil
- (b) Fuel cross over pipe is properly secured and is not rubbing with engine block.
- (c) Engine room must be maintained oil free and no foreign material like cotton waste etc are lying there.
- (d) Oil spillage from diesel engine into the alternator/generator room to be prevented.

Important Instructions to the crew:

For conventional locos:

1. Wedging of Q44 relay should be strictly prohibited.
2. In case of QOP dropping following Instruction must be followed
 - (a) Locomotive should be taken for thorough investigation and checking to the nearest loco sheds, if any traction motor is isolated by the driver on line
 - (b) The working of locomotive with HQOP at off position should be restricted to the nearest trip checking point or loco changing point, preferably the working of train for one or two block section should only be permitted.
 - (c) During working with HQOP at OFF position driver should be advised to have constant watch in HT compartment, rectifier and BA panel area and he should more frequently look back for any smoke emission from traction motor
 - (d) Driver should closely monitor of all the blower motors if corresponding air flow relay is Isolated. The same should be attended at the nearest trip inspection point or Electric Loco Shed.
 - (e) Drivers, Loco Inspectors and maintenance staff should be given training for swift and correct operation of fire extinguishers

For 3-phase electric locomotives:

3. Whenever the VCB trips while hauling a train with 3-phase electric locomotives, the LP & ALP should immediately check/read the DDS message carefully on the display screen of computer in the cab for the associated fault
4. In case the VCB has tripped through primary Over Current Relay with Priority 1 fault message the Loco Pilot Assistant should immediately inspect the Machine Room carefully looking for any signs of fire/smoke, spread/ spillage of oil especially near converter! transformer area and extinguish the same by using portable fire extinguisher.
5. Primary Over Current Relay in 3-phase electric locomotives is just like QLM relay In conventional electric locomotives and its operation should attract attention of the running staff in the same manner as for QLM relay
6. In case of larger fire specially over traction converter and transformer area the cocks of 22.5 kg CO2 cylinder provided in the locker on ALP side should be operated in both the cabs, keeping the Machine Room door in closed condition.

7. If no signs of fire/smoke are observed, LP should close the VCB only once more if the same trips again with Over Current Relay, the control electronics will be automatically switched off and panto lowered by software. The LP/ALP should not try to switch "ON" the control electronics or close VCB again and they should immediately ask for assistance from TLC.
8. Any case of fire/smoke message from Fire Detection Unit (FDU) appearing on display screen with/without tripping of VCB should not be ignored and crew should inspect the machine room thoroughly and look for any signs of smoke/fire/overheating/spark from equipment/joints and take further action accordingly.
9. It should be ensured that the LP & ALP running 3-phase electric locomotives are fully conversant with the display messages of fault available in the display screen of the computer. Refresher Courses should be arranged for new LPs/ ALPs at shorter intervals initially and later on based on this experience, this may be increased. The importance of Priority 1 and Priority 2 faults and their consequences should be explained to them

Compliance of the above instructions may be ensured and report to be submitted in following format:

1. No. of locos examined.
2. No. of irregularities along with nature of irregularity noticed.
3. No. of irregularities attended

For counselling of loco running staff, the compliance to be given in the following format-


- 1.. No. of staff counseled (Category wise):
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Central Railway

Divisional Office,
TRO Branch, Nagpur
Dt. 14.06.2024

No.: NGP/TRO/Safety/TRO DRIVE/24

C/- CEE (OP)/CSMT : For kind information..
All CCCO(R) : Display and on touch screen /hard copy in file.
SSE/Trip Shed/AQ : For information & necessary action.
CTLC/NGP : For information & necessary action.
All CLI : For counseling to all running staff.
C/- DI/DTC/AQ : To impart in training.

for 
Sr. DEE (TRO) /NGP