



Locos-Alive and Dead

Lecturer(Diesel)/IRIMEE

Objectives

- ❑ Commissioning –Definition
- ❑ Commissioning checks- POH returned Loco.
- ❑ Dead loco-Definition
- ❑ Basic requirement of hauling dead Loco.
- ❑ Hauling process-Dead locomotive
- ❑ Condemnation–Diesel loco
- ❑ Condemnation process

Erection ,Installation & Commissioning

- ❑ Erection:
 - ❑ Process of preparing/making/building the place or site according to the Machine /Plant to be installed.
- ❑ Installation:
 - ❑ Process in which machine's different single parts (may be electrical or mechanical) are connected with each other to make a single working machine or plant.
- ❑ Commissioning :
 - ❑ Process in which, we test the machine (Plant)whether it is working or not. When, we satisfied with its tested working performance say commissioned.

Pre-Commissioning Checks- Loco

- ❑ Pre-commissioning Checks:
 - ❑ A locomotive require minimum check and adjustments in shed before releasing for traffic
- ❑ Pre-commissioning checks of locomotives are carried out in following cases-
 - ❑ When new loco received from DLW
 - ❑ Loco received after POH.
 - ❑ Loco received on transfer.

Loco commissioning checks after POH(Mech)

- ❑ Make deficiency list.
 - ❑ Examine engine sump, Oil level, Main Bearing.
 - ❑ Fuel leak off pipe **fitment**, Pipe clamping.
 - ❑ V-Belt guard ,compressor fan guard, C/C Exh dust guard.
 - ❑ Emergency switch fitment, sand pipe etc
 - ❑ Checking of modification if any done
- ❑ Start loco for initial testing
 - ❑ Observe LOP,FOP,LOT,CWT etc
 - ❑ Check water P/p performance.
 - ❑ Unusual sound, Electrical sparking
 - ❑ Check all safety devices .

Cont..

- ❑ Do all items of quarterly schedule .
 - ❑ Check Tappet clearance,
 - ❑ Blow by testing, Orifice testing.
 - ❑ Sample checking & Testing of FIP & FIN
 - ❑ Wheel profile & Buffer height measurement.
 - ❑ Examine Air compressor sump, Counter wt & Valves.
 - ❑ Remove A9,SA9,C2 Relay and fit overhauled.
 - ❑ Check & grease universal shaft and fast coupling.
 - ❑ Axle box check up.
 - ❑ Check felt wick or replace.
 - ❑ Suspension Brg Lube oil quality check up.
 - ❑ Examine OST plunger & refit.
- ❑ Do LBT and record all Mechanical as well as Electrical parameters.

Loco commissioning checks after POH(Elect)

- ❑ Check Lay out of TM-2 & 5 for proper clamping of cable.
- ❑ Carbon brush condition of A/G & TM
- ❑ Check IR of Loco & Generator, major Aux. m/c
- ❑ Check IR of TM, TG & other major Aux.
- ❑ V groove cutting & ovality check up of AG.
- ❑ Check condition & connection-Grid
- ❑ Check battery condition, water level & Sp.gravity.
- ❑ ETS and other Safety device setting
- ❑ Check – Cable crimping in control compartment

Pre-commissioning checks-Detail

- ❑ In Detail - Pre-commissioning checks for Diesel Locos(ALCO)
- ❑ In Detail- Pre commissioning checks of HHP

Dead locomotive-Definition

- ❑ A locomotive which is not worked on its own power is defined as a Dead locomotive.

Need for hauling of Dead locos

- ❑ A locomotive may be required to be worked dead-
 - ❑ To clear a block section.
 - ❑ To take the loco to its destination.
 - ❑ For sending the loco to work shop/shed for repair.

Basic requirements –when hauling dead loco

- ❑ Max. Permissible length & Maximum permissible load of the train should not be exceeded.
- ❑ Suitable speed restriction shall be imposed on the train.(in case the max. permissible speed of the dead loco is less than the max. permissible speed of the train)
- ❑ As far as possible, brake should apply on dead loco in synchronization with working loco. In other cases, Dead locomotive will be hauled as piped vehicle.

Basic requirements-continue....

- ❑ Ensure-Reversor handle in neutral position.
- ❑ Ensure- Brushes lifted & properly secured in Tr.Motor (In case of long movement).
- ❑ Ensure-Brake pipe & Main reservoir pressure fully discharged.
- ❑ Ensure- All Circuit breaker & Battery knife switches is off.

Hauling of dead loco- By goods train

A. Brakes are functional –

1. Can be attached next to working loco and MR & BC equalizing pipes are connected.
2. Not attached to working loco or MR and BC equalizing pipe are not possible to connect.(attached at rear)

B. Brake are not functional-

1. Can be hauled as Piped vehicle(but only one loco is permitted)
2. Can be attached at the rear of brake van.

Hauling of dead loco- By goods train

- Maximum four locomotives (ie 2 working and 2 dead or 3 working and 1 dead) can be attached provided overall train length does not exceed the loop length from starter to fouling marks.

Type of section	No of working locos	No of dead locos
On all section	1	1
On section where double leading is permitted	2	1
	2	2
On section where triple heading is permitted	3	1

Conditions –For hauling dead loco(Brake not functional) at Rear

- ❑ In case ,it is not possible to work dead locomotives as piped vehicle ,the locomotive has to be attached at the rear.
- ❑ The following conditions are to be satisfied-
 - ❑ Only one loco is permitted to attached.
 - ❑ Gradients upto 1 in 100 is permitted .
 - ❑ Dead loco will be accompanied by a competent person not less than Asstt.driver. This competent person should be provided with suitable equipment including walkie talkie, flags, detonators etc.

Hauling dead loco-By Mail /Express/Mixed train

- ❑ A dead loco may be attached to Express/mail train with following conditions-
 - ❑ If brakes are functional-
 - ❑ Attached next to working loco.
 - ❑ Only one Dead loco may be attached to Mail / Express (Except Rajdhani/Shatabdi exp).
 - ❑ Dead loco may be attached at originating station. If attached en-route, the brake of train is at least 90% when dead loco is attached
 - ❑ Double/Triple headed loco permitted as per section.
 - ❑ If brake is not functional and it hauled as piped vehicle-
 - ❑ Condition given above in this slide is applicable.
 - ❑ If dead loco is attached in rear –
 - ❑ Conditions given in previous slide is applicable .

Condemnation-Diesel locomotive

- A. Over aged condemnation
- B. Under aged /Premature condemnation
 - A. Accidental locos.
 - B. Non Accidental locos
 - C. Surplus locos

A. Condemnation- Overaged locomotive

- ❑ Over-aged loco may be processed for condemned on age cum condition basis after personally inspected by Sr DME of Dsl shed and CWM of POH workshop.
- ❑ Proposal require vetting/ Concurrence of HQ finance.
- ❑ CME/CEE has full power.(if satisfied that Loco is completed code life, un-economical and unfit for mainline operation)

Condemnation Process-Over-aged diesel loco

1. Preparation of “Condition Report”.
2. Proposal framing.
3. Personally inspection by Sr DME in shed & by CWM in workshop.
4. Recommendation of Sr DME/CWM for condemnation.
5. Vetting of associate Finance and further by FA&CAO at HQ.
6. Approval of CEE/CME.(after he /she is satisfied that the locomotive is uneconomical to retained in service on age cum condition basis)
7. Detail of locomotive with above approval sent to COS for sale/disposal.

Condemnation process---cont..

8. Loco shall be sold by COS (loco should be in working condition) by inviting tender through process of the advertised tender./public auction.
9. The concerned COS will determine the reserve price of sale in consultation with associate fianace (taxes & duties will be levied on @25% of present day replacement cost of loco)
10. If the firm's response not received within one month , normal disposal of scrap should be processed.
11. Take approval of AGM.(For disposal off condemned loco if not in working condition)
12. Information to Loco stock holder, The concerned FA & CAO,CMM etc.
13. Remove good conditioned items.
14. Hand over the case to Stores for auction & disposal.

Condemnation –Accidental Loco/Premature loco

- ❑ Condemnation proposal should be sent to Rly. Bd accompanied by CEE/CME approval and with the concurrence of HQ/Finance.
- ❑ Three documents are to be attached with proposal as
 - ❑ Joint inspection report of 3 HODs,
 - ❑ action taken against delinquent staff.
 - ❑ Police report wherever required.
- ❑ MRS/MTR is the competent authority for approval of condemnation after obtaining finance concurrence of Board.

Authority of condemnation- Accidental/Premature loco

- ❑ Railway Board has power to approve condemnation for accidental/Premature loco against following important documents-
 - ❑ Joint Inspection report of 3 HOD(CMPE,CELE & FA&CAO)
 - ❑ Action taken against staff concerned/Punishment imposed.
 - ❑ Copy of the police report wherever required.

Condemnation Process-Accidental /Premature loco.

1. Prepare of “Condition Report” & sent to HQ.
2. Note/Proposal framed at HQ level.
3. Taken administrative approval of CEE/CME.
4. Approval letter sent to Sr.DME(D)/Dy.CME for further process.
5. Proposal framed by Sr.DME(D)/Dy.CME(D).
6. Vetting of Associated accounts/Dy.CAO/
Sr.DFM.

Condemnation process- cont...

7. Taken approval of CWM in shop and DRM in case of DSI shed.
8. Approved vetted proposal sent to HQ.
9. Inspection of 3 HOD & Joint inspection report preparation.
10. Joint inspection report with case file sent to Rly.Bds.
11. Approval from MRS/MTR after finance concurrence at Rly.bd.
12. Approved letter sent to all concerned.
13. At HQ, take approval of AGM for disposal.

Condemnation process-cont...

14. AGM approved letter send to all concerned.
15. Sr.DME/Dy.CME advised to hand over the loco for auction.
16. Useful materials are removed by the Custodian.
17. Wt particular preparation and offer to store dept.
18. Store dept will do auction.
19. Sale order will issue to the Purchaser.
20. Condemned material taken by the purchaser.

Condemnation –Non Accidental Loco

- ❑ Same procedure are to be adopted in this case as adopted in Accidental loco.

Condemnation –Surplus loco

- ❑ Locos which are not required and declared surplus (due to gauge conversion, closure of Lines) by traffic department may be with the concurrence of Associated Finance and personal approval of GM.
- ❑ MRS/MTR is the competent authority for approval of condemnation after obtaining finance concurrence of Board.

Condemnation process- surplus loco

1. CEE/CME of ZR will certify that loco is surplus.
2. Before the process of condemnation is initiated, the concerned railway may take confirmation from RITES/IRCON/IRCTC, that there is no requirement of such.
3. If ,no demand received from RITES or other Rly unit.
4. The proposal of condemnation is to be processed .
5. Concurrence of Associated Finance and personal approval of GM shall be taken.
6. Proposal will be sent to Rly Bd.
7. MRS/MTR as competent authority shall accord approval of condemnation after obtaining finance concurrence of Board.

Condition report of Diesel locomotive

1. Brief History
2. Condition of Major assemblies
3. Remarks related to repairs noticed in loco

Condition report- 1.Brief History

1.	Brief History	
a.	Loco No	
b.	Type	
c.	Home shed	
d.	Manufacturer	
e.	Date of commission	
f.	POH	
g.	Last IOH	
h.	M-24	
l	Service life	
j.	Codel life	

Condition report -2.Major assemblies(Case study)

1	Crank shaft	Not in good condition /Require reconditioning etc
2	Traction motor	Not in good condition /Require reconditioning etc
3	Traction generator	Not in good condition /Require reconditioning etc
4	Engine Base	Not in good condition /Require reconditioning etc
5	Aux generator ,Excitor	Not in good condition /Require reconditioning etc
6	BKBL	Not in good condition /Require reconditioning etc
7	Governor	Not in good condition /Require reconditioning etc
8	Dynamic Grid	Not in good condition /Require reconditioning etc
9	Battery	Not in good condition /Require reconditioning etc

Condition report –3.Repaired noticed(Case study)

- ❑ F/Oil tank old, require changing.
- ❑ U/s from RTMB, FIP supports, ECC, Radiator room, Expressor, Vibration damper, Cam gear, TG, Aux & Excitor etc
- ❑ Radiator core very old and frequently requires attention due to water leakage.
- ❑ Eng Hood in bad condition.
- ❑ Bogie Not good, requires reconditioning
- ❑ Chassis Not good, requires reconditioning
- ❑ Wheel set requires changing
- ❑ Eng. Block Not good, requires reconditioning
- ❑ TSC Not good, requires reconditioning
- ❑ Cam Shaft Not good, requires reconditioning
- ❑ Engine base Not good, requires reconditioning
- ❑ Exhaust Manifold Requires changing

Policy letter-Use of Over aged loco as shunting

No. 2001/46675
New Delhi dated 04/2/2002.

Chief Mechanical Engineers,
All India Railways.

Sub: Use of overaged WDM2 locomotives for shunting services.

Ref: RDSO's letter no. SD.WDS4.dated 3.1.2002. (copy enclosed)

RDSO, vide their letter under reference, have issued guidelines for modifying overaged WDM2 locos which are to be used for shunting services. These are summarised below:-

1. Throttle handle should be physically restricted to 6th notch. In due course, Railways can switch over to modified master controller which would make the 7th & 8th notch positions ineffective.
2. Transitions and dynamic braking would not be required. Hence, transition cards, dynamic braking grids, dynamic grid blower motor, BKI, three power contractors & Axle generator can be removed.
3. MU operation and twin pipes would not be needed. Hence, F1 selector valve, MU2B valve, Brake cylinder equalizing pipe, MR equalising pipe, Feed valve & Feed pipe can be removed.

The above is for your information and necessary action please.

DA: As above.

Enclosure not provided -
2-2-02
11/3

CME

CMRSD

CME/OTF

(Anil V. S.)
Dir. Mech. Engg. (Tr.)
Railway Board.

Copy to:-
DG(MP), RDSO, Lucknow.

टेलीफोन/Tele :+91 (522) 246 5733 (PBX)

तार/Telegram : 'RAILMANAK', Lucknow

फैक्स/FAX :+91 (522) 245 3916 (RDSO)

ई-मेल/ E-mail ID: jdmpengine@gmail.com



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011

Government of India - Ministry of Railways
Research Designs & Standards Organisation
LUCKNOW - 226 011

No: SD.EN-I.Misc

Date: 21.06.12

मुख्य चालन शक्ति अभियंता (डीजल)
सभी जोनल रेलवे.

Sub: Safety checksheet for engaging over-aged WDM-2 locos for inferior services.
Ref: Letter No 2001/M(L)/466/75 dated 08.05.12 from Rly Bd.


Traffic needs may cause circumstances when Railways require engaging over-aged WDM-2 locos for inferior services eg shunting as WDM-2S locos. Identification is done in such a way that the locos are safe to run, and, are not otherwise worthy of summary condemnation following completion of the codal life. These locos are normally used for departmental service.

High cost maintenance schedule like POH etc may not be carried out on these locos. However, maintenance of bogie and other safety items shall continue to be in accordance with the document MP.Misc-140 (Rev 0.01) on schedule of standard examination for Alco locos. Safer working of the locos shall be ensured by the Railways.

In view of above, it is recommended that for engaging over-aged WDM-2 locos for inferior services, Railways may ensure minimum safeguards as per following checksheet:

1. Identification of locomotive on the basis of examination with respect to the condition of chassis, camber etc.
2. Prefixing loco number by adding "0" in order to distinguish from mainline loco.
3. Painting 1.5 ft broad yellow strip all around in order to distinguish the loco in inferior service from others.
4. Removing transition cards for ensuring working of traction motors in series parallel combination only in order to restrict the speed to around 30/40 kmph on level track.
5. Power output of the engine may be restricted to around 1800 HP.
6. Stencilling "NOT FIT FOR PASSENGER AND GOODS SERVICE. FIT FOR DEPARTMENTAL SERVICE ONLY." Outside the cab on both sides.

Railways are advised for implementation, accordingly.


(एस. पी. शिवाजी)
सं. निदेशक / चालन शक्ति
कृते महानिदेशक / चालन शक्ति

विज्ञक (प्रशा) हाजीपुर
पूर्व-मध्य रेलवे बोर्ड का
दिनांक 31.12.2009

भारत सरकार GOVERNMENT OF INDIA
रेल मंत्रालय MINISTRY OF RAILWAYS
(रेलवे बोर्ड RAILWAY BOARD)

Policy letter - Premature condemnation

No. 2009/M(L)/466/2 (19) Policy

New Delhi, dt. 23.12.2009

General Managers,
All Indian Railways,
E.C.R.

Sub: Policy in regard to premature condemnation of locomotives damaged in accidents.

Ref: Board's letter No.99/M(L)/466/801(NR) dt.14.12.99.

As per extant instructions proposals for the premature condemnation of locomotives should be processed by the owning Railway after vetting by Associate Finance and should be accompanied by the following documents while seeking Board's approval.

- Joint inspection report of 3 HODs.
- Action taken against delinquent staff, including of punishment imposed, if any
- Copy of the police report wherever required.


In partial modification of the above, it may be ensured that such proposals are accompanied by CME's or CEE's (PHOD/CHOD) certificate, as the case may be, for consideration by Board.

This issues with the concurrence of Finance Dte. of Railway Board.

IS
1/1

cmr

✓


(S.M. Sharma)
Dir. Mech. Engg. (E),
Railway Board

Copy for information to : CME's, All Indian Railways.

Policy letter -Premature condemnation

Government of India
Ministry of Railways
(Railway Board)

No. 99/M(L)/466/801(NR)

New Delhi, dated 14.12.99

Chief Mechanical Engineers,
All Indian Railways.

Sub: Policy in regard to condemnation of locomotives damaged in accidents

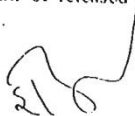
Ref: Board's letter no. 87/M(L)/466/901 dated 24.10.90

It has been noticed that there is a considerable delay in receipt of proposals for condemnation of locos damaged in accidents and which are beyond economical repair. Often, the proposals are not having complete details due to which condemnation gets delayed. Expeditious condemnation would help in the capital-at-charge being written off and avoidance of payment of dividend thereon.

It is reiterated that such proposals should be sent early and should be accompanied with the following documents: -

1. Joint inspection report of 3 HODs.
2. Action taken against delinquent staff including punishment imposed.
3. Copy of the police report wherever required.

In cases of locos involved in accidents over another Railway, the joint inspection report of 3 HODs may be made by the Railway in which the accident has taken place. However, the proposal has to be processed by the owning Railway who should send the same to Railway Board after vetting by associated finance. The credit of released materials would accrue to the owning Railway.


(Shakeel Ahmed)
Exec. Dir. Mech. Eugg. (Tr.)
Railway Board

THANKING YOU

The image features the words "THANKING YOU" in a bold, blue, sans-serif font. The text is rendered with a 3D effect, showing highlights and shadows on the letters. Below the text is a soft, white-to-blue gradient reflection that mirrors the text above it. The entire composition is centered on a plain white background.