

# ALP Refresher Training Course - Combined

9873/2024

2024/E(Trg)/41/13  
Modules

	Modules	Duration
A	Transportation Module	6 days
B	Technical Module	12 days
	<b>Total</b>	<b>18 days</b>

**DESCRIPTION**

**DURATION**

Transportation, First Aid, Fire Fighting

6days

Sno.	Subject	Duration in days
1.	Brief description of GR & SR. Correction slips	6 days
2.	Important definitions such as Adequate distance, Block Section, Isolation, Faulting mark, Running Line, Axle counter, Station section, etc.	
3.	Light engine, Relief Engine, Banking Engine, Train Engine, Shunting Engine, etc.	
4.	Systems of working, Ghat working/Ghat Rules Train formed from a non-TXR point, etc.	
5.	Unusual working e.g. failure of Head light, train received on Blocked line or to be started from a Non-Signal/Non running line, without brake van or without guard, with hot axles, etc.	
6.	Types of signaling systems, classification of signals. Approach and Departure signals permissive signals, subsidiary signals, automatic signal, semi-automatic signal, etc.	
7.	Defective signals and authority to pass.	
8.	Various authorities used during train operation & shunting	
9.	Duties of in case of accident, Mid Section derailments, protection of block section in case of accidents/incapacitation, Use of detonators, etc.	
10.	Duties in case of fire in train/loco.	
11.	Identifying and handling of various types of fire extinguishers, precautions to be taken while extinguishing fire, Render first aid to the burn injuries, first aid to persons affected by suffocation, communication, etc.	

**(B)ALP Refresher Training Course- Combined**

Course Code - ARM

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Module no.	2024/E(Trg)/41/13 Training Content	Duration in days
ARM-1	Loco module – Summarizing of various systems/sub-systems of Electric locomotives (3-Phase, Conventional, WAG-12 etc.) and Diesel Locomotives and important modifications in locomotives along with related instructions for ALP.	2
ARM-2	Driving module	1
ARM-3	Loco Pneumatic module (Electric & Diesel locos)	2
ARM-4	Loco Operation module	1
ARM-5	Safety module	½
ARM-6	TrD module	1
ARM-7	C&W module	1
ARM-8	Simulator Training	
ARM-9	<b>Case Studies</b> of various accidents with focus on scenarios where prompt actions by ALPs could have averted the incidence or accident.	1
ARM-10	Assessment and Grading	½
	<b>Total days</b>	<b>12</b>

**Note :**

1. This course is deemed to refresh the technical learning of an ALP in both Electric as well as Diesel Traction i.e. the trade(s) he is trained and competent in. If Zonal Railways feel the need of dedicated course for single traction, they may tweak only the content of modules, suitably, for ALPs trained in single traction only, with the permission of PCEE.
2. **Any dual trained ALP must attend this course only**, upon which his learning in both traction – Diesel and Electric shall be deemed to be refreshed.

**DESCRIPTION****Loco Module**

including important modifications in locomotives

**DURATION**

2days

**CONTENT**

<b>Sno.</b>	<b>Subject</b>	<b>Duration in days</b>
7.	Discussion on problems faced by ALPs during train working	2 days
8.	Summarizing of general description of Three phase & conventional electric locomotives (including microprocessor & SIV based locos, WAG12 etc.)	
9.	Summarizing of general description of different type of Diesel locomotives (including HHP & Microprocessor locos)	
10.	Summarizing of locations of safety & important equipment on electric & diesel locomotives.	
11.	Summarizing of location and functions of various types of relays, switches, MCBs, fuses, and other electrical equipment, along with their normal positions, need to be regularly checked and operated during train operations	
12.	Description of latest modifications and changes in electric & diesel locomotives and their requirement, actions by crew etc.	

**DESCRIPTION**  
Driving Module

**DURATION**  
1 day

**CONTENT**

Sno.	Subject	Duration in days
1.	Proper call out of signal with LP. Demonstration of procedure of call out signal as per instructions laid down. This should be demonstrated by each trainee ALP multiple of times.	1 day
2.	<ul style="list-style-type: none"> <li>• Use of emergency brake (RS valve) - demonstration of emergency brake application through RS valve. This should be practically operated by each trainee ALP.</li> <li>• Keep watch on alertness of LP.</li> <li>• Sharp lookout on signal, track, OHE &amp; adjacent line, Tress passers etc. Invariably keep the eye on the speedometer for speed monitoring and warn LP if speed exceeds the prescribed speed limit.</li> </ul>	
3.	<ul style="list-style-type: none"> <li>• Checking procedure of Flasher light and its usage. Action to be taken when flasher light of opposite direction train is glowing.</li> </ul>	
4.	<ul style="list-style-type: none"> <li>• Looking back in curves for smooth running of train i.e. abnormal sound, hanging part, smoke, etc.</li> <li>• Reading of gauges and recording in logbook, recoding energy/fuel consumption in logbook &amp; CMS</li> </ul>	
5.	Inspection of loco at halts, inspection of axle boxes, under frame equipment and TM fixation and draining of MRs etc.	
6.	Checking of loco at the originating, intermediate points and crew changing points on line.	
7.	Checking of coupling after attaching onload	
8.	Action to be taken in case of OHE tripped during dynamic / regenerative braking	
9.	<p>Procedure of passing neutral section</p> <ul style="list-style-type: none"> <li>• Description &amp; usage of neutral section related boards (500 meter board, 250 meter board, DJ open board, DJ close board).</li> <li>• Precaution to be taken before neutral section.</li> </ul>	

ARM-3

**DESCRIPTION**  
Loco Pneumatic Module

**DURATION**  
2 days

**CONTENT**

Sno.	Subject	Duration in days
1.	Summarizing of braking system of electric & diesel locomotives	2 days
2.	Action to be taken in case of MR, BP, FP pressure not build up/not maintaining	
3.	Miscellaneous failures of air brake of locomotives	
4.	Pneumatically isolation of bogie	
5.	Overview on operation of PTDC in three phase electric locomotive	
6.	Location of air dryer and isolating procedure	
7.	Actions to be taken in case of BP/ FP angle cock broken/Hose pipe damaged due to CRO	
8.	Application/releasing of parking/hand brake of locomotives and related failures & troubleshooting	
9.	Procedure of various tests & checks related to loco brake system like CP efficiency test, BP & FP leak test, train leak test, Loco brake power test, etc.	
10.	Miscellaneous failure related to brake system of electric & diesel locomotives along with troubleshooting	

ARM-4

**DESCRIPTION**  
Loco Operation Module

**DURATION**  
2 days

**CONTENT**

Sno.	Subject	Duration in days
1.	Discussion on various common defects in different type of electric & diesel locomotives	2 days
2.	Reading of Troubleshooting directories of electric & diesel locomotives, fault acknowledgment, actions as per TSD.	
3.	Isolation procedure for isolating various equipment.	
4.	Wedging of relays & contactors in conventional locomotives.	
5.	Miscellaneous failures of electric & diesel locomotive	
6.	Correction in TSD	
7.	Discussion on various tests to be conducted on electric & diesel locos	
8.	Parking/hand brake related failures & troubleshooting	
9.	Procedure of MU loco operation, cab changing in MU loco, dead attaching of loco, stabling of locomotives, etc.	
10.	Grounding & un-grounding of electric locomotive	
11.	Summarizing the duties defined in ACTM like	

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Sno.	Subject	Duration in days
	Cleanliness of Loco, ALP shall assist the LP, appearance and proper uniform, duty assigned to him by the LP/CC/Sr.CC, maintaining a log of times and detentions enroute, etc.	
12.	Actions to be taken in case VCD act on line	
13.	Attaching procedure of Dead locomotives & checking procedure for brake binding	

ARM-5

DESCRIPTION  
Safety Module

DURATION  
1 day

## CONTENT

Sno.	Subject	Duration in days
1.	Action to taken in case train / loco stalled on gradient.	1 day
2.	Actions to be taken to avoid rolling down/rolling back of train/loco.	
3.	Action to be taken in case of train parting	
4.	Action to be taken in case flat wheel is detected	
5.	Derailment, collision, fire etc	
6.	Train protection and opposite line protection	
7.	OHE hanging / OHE breakdown	
8.	Axle seizure / hot axle	
9.	Smoke from underslung equipment	
10.	During water on track or flood	
11.	Obstructed track / land slide	
12.	Train operation during fog/poor visibility	
13.	In case of train parting	
14.	Flasher light of opposite train glowing	
15.	Panto entanglement and securing of broken pantograph & isolation of pantograph (through HPT link on loco roof)	
16.	In case of loco entered in unwired territory	
17.	Cattle Run Over (CRO) & inspection of loco after CRO	
18.	Stabling of locomotives & securing of train/loco to avoid rolling down/rolling back.	
19.	Communicating to TLC/TPC/Section controller or other official regarding information of any abnormality and assistance required (protocol to be followed like train no., loco no., section, between stations, km no., nature of abnormality, assistance required, etc.)	

ARM-6

DESCRIPTION  
TrD Module

DURATION  
½ day

## CONTENT

Sno.	Subject	Duration in days
1.	Brief Knowledge of TrD	½ day

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	<ul style="list-style-type: none"> <li>Brief overview of OHE system</li> <li>Familiarization with OHE equipment for identification (including cantilever assembly)</li> </ul>	
2.	Procedure of passing neutral section <ul style="list-style-type: none"> <li>Description &amp; usage of neutral section related boards (500 meter board, 250 meter board, DJ open board, DJ close board)</li> <li>Precaution to be taken before &amp; after neutral section.</li> </ul>	
3.	Provision of Sigma Board & usage.	
4.	Communication with TPC/TLC in case of panto broken or OHE hanging.	
5.	Action to be taken in case of panto broken/entangled.	
6.	Roof inspection & isolation of pantograph from HPT link and securing of broken panto, etc.	
7.	Duties of ALP during OHE Break Down.	

ARM-7

**DESCRIPTION**  
C&W Module

**DURATION**  
1 day

**CONTENT**

Sno.	Subject	Duration in days
1.	Different types of Rolling stock - Nomenclature	1 day
2.	Summarization of air brake system of coaches, wagons, BMBS and APS, etc and Hand brake in rolling stock.	
3.	Alarm chain pulling - resetting & isolation, FIBA, Fire Detection (VESDA), etc	
4.	Continuity test, cases of brake binding and releasing, Flat tire detection and action to be taken, isolation of distributor valve, etc	
5.	Guard & Loco Pilot check - clearance from road side station/sidings/non-TXR points & brake power calculation	
6.	Duties in case of fire in train	
7.	Summarizing of type of Brake power certificates, percentage of brake power required in goods/mixed/passenger trains, etc.	
8.	Overview of EMU/MEMU, Vande-Bharat type train set, Push-Pull, etc.	

ARM-8

**DESCRIPTION**  
Simulator Training  
& Tripping car

**DURATION**  
1 day

**CONTENT**

Sno.	Subject	Duration in days
1.	Simulator training for confidence building to apply emergency brake (RS valve) in any unsafe situation.	1 day

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2.	Demonstration of signal call out by each ALP	
3.	Manual operation of GR & EEC in conventional loco tripping car (each individual trainee ALP)	

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ARM-9

**DESCRIPTION**  
Cases Studies of various accidents

**DURATION**  
1day

**CONTENT**

Sno.	Subject	Duration in days
1.	Case Studies of various accidents and lessons. (Particularly focusing on scenarios where prompt actions by ALPs could have averted the incidents or accidents.)	1 day

ARM-10

**DESCRIPTION**  
Assessment and Grading

**DURATION**  
½ day

**CONTENT**

Sno.	Subject	Duration in days
1.	Assessment and grading of trainees for judging training performance. There shall <b>NOT</b> be any pass/fail criteria upon assessment.	½ day

**Instruction for training centers & Instructors (Technical Module)**

- The above content is for technical training only. Candidate/trainee would also need to undergo requisite Traffic Transportation training.
- This course shall be applicable to all ALPs and is deemed to refresh the learning of both the tractions.
- Classroom training to have audio-visual aids with digital content.
- Deep knowledge of circuits (electrical or pneumatic), etc is not required.
- Training should primarily emphasize the activities and responsibilities of the ALP in their day-to-day operations with locomotives/trains.

- During subject-specific classroom training, it is essential to emphasize discussions on safety cases, including SPAD, accidents, derailments, collisions, side collisions, and incidents involving entering unwired/sand humps. This emphasis should highlight how adherence to proper procedures or correct actions by the ALP on the subject could have effectively prevented such cases.
- Furthermore, any outstanding topics relevant to the assigned duties should be integrated into the training curriculum as necessary.
- There shall **NOT** be any pass/fail criteria in the refresher course.

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