
METROLINK STUDY GUIDE

1. What are the positions (in order) of the automatic brake valve on the Metrolink Cab-Car?

A: Release, Running, Suppression, Handle Off and Emergency.

B: Release, Minimum Reduction, Full Service, Suppression, Handle Off and Emergency.

C: Release, Minimum Reduction, Suppression, Full Service, Handle Off and Emergency.

D: Release, Pressure Maintaining, Service, Lap, Handle Off and Emergency

REF: Operators Manual, page 93

2. Where are the hand brakes located on Metrolink 600 series Cab-Cars.

A: End.

B: B-End.

C: Adjacent to the Vestibule doors.

D: Metrolink 600 series cab-cars are equipped with parking brakes only and do not have hand brakes.

REF: Operators Manual, page 115

3. What color is the 74 VDC loco control receptacle on Metrolink 600 series Cab-Cars?

A: White.

B: Blue.

C: Black.

D: Yellow.

REF: Operators Manual, page 23

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4. What color is the Car Control Communications receptacle on Metrolink 600 series Cab- Cars?

A: White.

B: Blue.

C: Black.

D: Red.

REF: Operators Manual, page 23

5. Why is a looping plug required in the Communications receptacle on Metrolink Cab- Cars?

A: For an operative intercom

B: To complete the Generator Field circuit for the car doors.

C: For operative E brakes.

D: For operative radio communication.

REF: Operators Manual, page 28

6. Metrolink 600 series cab-cars are equipped with what type of control valve?

A: 24RL.

B: 26L.

C: 26C.

D: 6.

REF: Operators Manual page 121

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7. When operating from an F-59 or MP-36 locomotive, how must Metrolink 600 series cab-cars be set up?

- A:** Automatic Brake Valve Cut-in, Reverser removed, Ditch lights off, Marker lights on, Generator Field off, Lock Cab-car door.
- B:** Automatic Brake Valve Cut-out, Reverser removed, Ditch lights off, Marker lights on, Generator Field off, Lock Cab-car door.
- C:** Automatic Brake Valve Cut-out, Reverser in Neutral, Ditch lights on, Marker lights on, Generator Field off, Lock Cab-car door.
- D:** Automatic Brake Valve Cut-out, Reverser in Forward, Ditch lights off, Marker lights on, Generator Field off, Lock Cab-car door.

REF: Operators Manual page 95 and 96

8. How can the brakes be cut out on Metrolink 600 series Cab-Cars?

- A:** Trucks can be cut out individually.
- B:** Each axle can be cut out individually.
- C:** Brakes can be cut out on the entire car by cutting out the control valve.
- D:** Both A and C are correct.

REF: Operators Manual page 104

9. Where is the Alertor (TMS) pneumatic cut out located on Metrolink 600 series Cab Cars?

- A:** Behind over-head access panel located above the windshield.
- B:** Outside, adjacent to the B end truck cut-out.
- C:** In the electric locker on the B end of the Cab-Car.
- D:** In either the A end crew locker or under the Operating Console.

REF: Operators Manual

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10. On Metrolink 600 series Cab-Car, what color is the door indicator light when an emergency is initiated by pulling an emergency brake valve?

- A:** Red.
- B:** White.
- C:** Yellow.
- D:** No indication.

REF: Operators Manual page 103

11. On Metrolink 600 Series Cab-cars, how is the locomotive shut down in an emergency?

- A:** Turn off the main circuit breakers.
- B:** Push the ENGINE STOP push button.
- C:** Engine will shut down automatically.
- D:** Push the Red Stop Button behind the Engineer.

REF: Operators Manual page 91

12. On Metrolink Cab-Cars, when your headlights do not work, what do you check?

- A:** Headlight Switch is positioned to ON
- B:** The circuit breakers are on in the cab circuit breaker panel.
- C:** If the Headlight are burned out.
- D:** All of the above.

REF: Operators Manual page 92 and 103

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13. If main reservoir air pressure becomes unavailable on a Metrolink cab car, can you continue operating from the cab car?

A: No.

B: Yes, main reservoir pressure is not required for Cab-Car operation.

C: Only when operating from the Cab-Car.

D: Only when operating from the engine.

REF: No direct reference

14. If the alarm bell sounds in the Cab-Car, how can you silence the alarm?

A: Press the reset button.

B: It will silence automatically.

C: Shut down the engine.

D: Break the seal and silence the alarm.

REF: Metrolink Operating Trouble Shooting Guide Pg-2

15. If the alarm bell sounds in the Cab-Car and the warning lights are not on, what is the problem?

A: HEP problem.

B: Wheel Slip problem

C: Traction Motor problem

D: Main Engine Problem

REF: Metrolink Operating Trouble Shooting Guide Pg-2

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16. If the alarm bell sounds in the Cab-Car, which of the following could be the problem?

- A:** HEP problem.
- B:** Main Engine Problem.
- C:** Traction Motor\Wheel Slip problem.
- D:** All of the above are correct.

REF: Metrolink Operating Trouble Shooting Guide Pg-2

17. If you are operating with reduced power, the alarm bell sounds in the Cab-Car and the check engine light is on, what is the problem?

- A:** Low Fuel.
- B:** Low Oil.
- C:** Low Water.
- D:** Hot Engine.

REF: Metrolink Operating Trouble Shooting Guide Pg-3

18. If the alarm bells sounds and it is determined that the engine is shutdown or not loading, what is required?

- A:** Wait for someone to call to assess the problem.
- B:** Ask for another engine.
- C:** Check faults, determine problem and notify the MOC.
- D:** Contact Manager and fill out unusual occurrence report.

REF: Metrolink Operating Trouble Shooting Guide Pg-3

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19. If the alarm bells sounds and the wheel slip warning light is on continuously, what is required?

A: Call CNOC.

B: Call a MOC.

C: Check the Locomotive for a locked axle or traction motor flashovers.

D: Proceed at 50MPH for 10miles and inspect

REF: Metrolink Operating Trouble Shooting Guide Pg-2

20. When must an ATS wayside signal inductor type warning be acknowledged?

A: When the cab signal changes to a more restrictive indication.

B: When the cab signal changes to a less restrictive indication.

C: After passing a block signal indication that is less than clear.

D: If a block signal indication is better than clear.

REF: DEFINITIONS

21. What is the indication of an impending penalty when operating in ATS territory?

A: Audible alarm sounds for 3 seconds.

B: Time to penalty indication.

C: Bell rings one to three times.

D: Audible alarm sounds and visual indication illuminates.

REF: AMT-3, 7.3

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22. How is an ATS warning normally acknowledged when operating in ATS territory?

- A:** By activating the acknowledgement button within 4-6 seconds.
- B:** By activating the acknowledgement button within 10 seconds.
- C:** Moving the ABV to 'Suppression' position within 15 seconds.
- D:** By depressing the penalty 'reset' button located in Control Area 1.

REF: AMT-3, 7.3

23. How is it determined when ATS has been properly tested?

- A:** Examine SMP 101- Inspection Record Service Operation Card.
- B:** Check SMP 100 - Equipment Condition Report.
- C:** Check SMP 1173 - Class I Brake Test Inspection Certificate.
- D:** Perform your own test whenever taking charge of a locomotive.

REF: AMT-3, 7.1.4

24. Which step of the following steps must be followed in order to recover from an ATS penalty brake application?

- A:** Move the ABV handle to 'Suppression' position.
- B:** Move the Train Control Transfer Switch to the 'Cab Signal' position.
- C:** Depress the acknowledge button and then the ATS reset button.
- D:** Both A and C are correct.

REF: AMT-3, 7.3

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25. Which of the following is considered an ATS failure after passing a signal within ATS limits which requires acknowledgment?

- A:** Audible alarm fails to sound.
- B:** Failure to acknowledge results in a penalty application.
- C:** ATS light illuminates.
- D:** All of the above.

REF: Metrolink TTSI

26. What must be determined when performing the ATS Departure Test?

- A:** Acknowledge feature will 'acknowledge' and ATS alarm.
- B:** Penalty brake application will be initiated if alarm is not acknowledged after releasing brakes.
- C:** Ability to recover from a penalty application.
- D:** All of the above are correct.

REF: AMT-3, 7.3

27. How is a ATS penalty suppressed after passing a signal requiring acknowledgement?

- A:** By activating the acknowledgement button within 4-6 seconds for a period of two seconds.
- B:** By activating the acknowledgement button within 10 seconds for a period of two seconds.
- C:** Acknowledgement until the warning tone is silent and the ATS alarm light is extinguished.
- D:** Both A and C are correct.

REF: AMT-3, 7.3

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28. To recover from an ATS penalty application:

- A:** Throttle must be in IDLE or OFF.
- B:** ABV handle placed in SUPPRESSION or LAP position.
- C:** Depress the acknowledge button and then hold the ATS reset button for at 2 seconds.
- D:** All of the above.

REF: AMT-3, 7.3

29. An ATS/IIATS failure:

- A:** Must be promptly reported to the train Dispatcher.
- B:** Must be recorded on the SMP 1173.
- C:** Must be recorded on the SMP 101.
- D:** Both A and C are correct.

REF: Metrolink TTSI

30. What does the IIATS inert inductor protect in Metrolink territory?

- A:** Wayside Signals.
- B:** The beginning of IIATS territory.
- C:** Certain permanent speed restrictions.
- D:** Absolute signals.

REF: DEFINITIONS & AMT-3, 7.3

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31. How can it be determined that the ATS system has been properly tested?

- A:** SMP 101.
- B:** SMP 1 173
- C:** SMP-21A.
- D:** SMP-100.

REF: AMT-3, 7.1.4

32. When a penalty application of the ATS system occurs, what steps must be followed?

- A:** Cut-out the pneumatic cut-out cock for ATS.
- B:** Open and close the ATS circuit breaker on the circuit breaker panel.
- C:** Place automatic brake valve in suppression, press the acknowledge button, next press the ATS reset button and move the automatic brake valve to release.
- D:** Cut-out the pneumatic Alertor (TMS) cut-out cock.

REF: AMT-3, 7.3.2

33. Which of the following is considered an IIATS failure?

- A:** Audible Alarm does not sound, when passing over two successive IIATS inert inductors.
- B:** Warning light does not illuminate, when passing over an two successive IIATS inert inductors.
- C:** Acknowledgment at two successive IIATS locations does not prevent a penalty application.
- D:** All of the above are correct.

REF: Metrolink TTSI

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34. When the IIATS is inoperative and the Engineer does not respond to the Conductors notification of an approaching wayside inductor, what is the Conductor required to do?

A: Call the dispatcher.

B: Call a Transportation Manager.

C: Stop the train.

D: Have a job briefing with the Engineer at the next station stop.

REF: Metrolink TTSI

35. When the IIATS is inoperative and the Conductor does not communicate with the Engineer the location of the approaching wayside inductor, what is the engineer required to do?

A: Call the dispatcher.

B: Call a the Transportation Manager.

C: Stop the train.

D: Proceed not exceeding 40MPH until the Conductor communicates the wayside inductors location.

REF: Metrolink TTSI

36. The F59PHI locomotive has _____ horsepower?

A: 2300

B: 3000.

C: 4000

D: 4250

REF: F59 PHI Operator's Manual, Section 1 page 1-1

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37. The F59PHI locomotive has what type of Automatic Brake Valve?

A: 30CDW.

B: 26LU-L.

C: 24RL.

D: MU-2A .

REF: F59 PHI Operator's Manual

38. What are the positions of the Automatic Brake Valve on the F-59PH Locomotive?

A: Release, Lap, Service, Handle Off and Emergency.

B: Release, Pressure Maintaining, Service, Handle Off and Emergency.

C: Release, Minimum Reduction, Suppression, Full Service, Handle Off and Emergency.

D: Release, Minimum Reduction, Full Service, Suppression, Handle Off, and Emergency.

REF: Operators Manual 2-33

39. The electronic fuel injection system on the F59PHI locomotive is managed by:

A: the EMDEC system.

B: a Woodward Governor.

C: the turbocharger sump system.

D: none of the above.

REF: F 59 PHI Operator's Manual, Section 1 page 1-12

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40. The main diesel engine of an F59PHI locomotive directly drives the:

- A:** main and auxiliary generators.
- B:** air compressor.
- C:** traction motor blowers.
- D:** all of the above.

REF: F 59 PHI Operator's Manual, Section 1 page 1-10

41. The F59PH (800 Series) has one fuel cell, to determine how much fuel is in the fuel tank you would check which of the following:

- A:** Fuel bypass sight glass.
- B:** Fuel tank Control Panel.
- C:** Fuel tank gauge on the outside of the engine.
- D:** Display Diagnostic Panel (DDS)

REF: F 59 PHI Operator's Manual: Not Listed

42. On the F59PHI locomotive, the engine purge bypass switch is used to:

- A:** start the engine.
- B:** slow cranking speed during the first few seconds of starting to minimize the possibility of hydraulic lock damage.
- C:** run the starter in cold weather.
- D:** this feature only on P42 and F-40 locomotives.

REF: F 59 PHI Operator's Manual, Second Edition Section 2 page 2-14

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43. If you had a starter thermal overload on an F59PHI locomotive, how long would you need to wait before attempting a re-start?

- A:** Two minutes for starter motor to cool.
- B:** Four minutes.
- C:** Six minutes.
- D:** Until the Thermal Overload Light goes Off.

REF: F 59 PHI Operator's Manual, Second Edition Section 2 page 2-68

44. The HEP power plant on an F59PHI locomotive produces how many KVA (KILO-VOLT-AMPERES)?

- A:** 480 VAC.
- B:** 650 KVA.
- C:** 800 KVA, just like the F-40's.
- D:** 2000 volts to the main generator.

REF: F 59 PHI Operator's Manual, Second Edition, Section 1 page 2

45. Besides allowing you to start the HEP engine, the HEP start station on an F59PHI locomotive would allow the operator to do what else?

- A:** Check the left and right amperage output.
- B:** Reset faults (ground and overvoltage).
- C:** Stop HEP diesel engine.
- D:** All of the above.

REF: F 59 PHI Operator's Manual, Section 2 page 2-90

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46. If the main locomotive diesel engine was not running on an F59PHI, and you were to start the HEP diesel engine, to ensure fuel was being delivered to HEP engine what would you need to do?

- A:** Hold the HEP fuel prime valve lever (located on the right side of the AC cabinet), in the open position.
- B:** Place FP/ES Switch in prime and hold for at least two (2) minutes.
- C:** Push start and hope it works.
- D:** All of the above.

REF: F 59 PHI Operator's Manual, Section 3 page 42

47. On an F59PHI locomotive, which HEP shut down methods have a two-minute cool down period?

- A:** HEP Engine Stop Switch on operator console.
- B:** MU shut down.
- C:** Emergency Fuel Cutoff button in the locomotive cab.
- D:** Both A and C are correct.

REF: F 59 PHI Operator's Manual, Section 3 page 46

48. On an F59PHI locomotive, which HEP shut down method, does not have a cool down period and should only be used in an emergency?

- A:** HEP Engine Stop Switch on operator console.
- B:** MU shut down only.
- C:** Engine Stop Button on HEP start station.
- D:** The Locomotive EMERGENCY STOP, on the HEP start station and the MU shut down.

REF: F 59 PHI Operator's Manual, Section 3 page 46

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49. On an F59PHI locomotive, how many ways are there to shut off the HEP engine?

A: 2

B: 3

C: 4

D: 5.

REF: F 59 PHI Operator's Manual, Section 3 page 46

50. On an F59PHI locomotive, what is the BUS setting?

A: Local.

B: Train Lined.

C: Bi-Level (Dual Bus).

D: Single Bus.

REF: F 59 PHI Operator's Manual, Section 2 page 50

51. To prevent a penalty brake application from occurring on an F59PHI locomotive, the Alerter may be reset by movement of the:

A: throttle.

B: independent brake.

C: automatic brake.

D: all of the above.

REF: F 59 PHI Operator's Manual, Section 3 page 13

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52. What is the Pilot Valve setting on the F59PHI, 800 series locomotive, when operating in Freight?

- A:** FRT.
- B:** PASS.
- C:** TEST.
- D:** There is not a FRT setting.

REF: F 59 PHI Operator's Manual, Section 2 page 8-9

53. On an F59PHI locomotive, EMDEC stands for:

- A:** Engine Maintenance Diagnostic Circuit.
- B:** Electro-Motive Division Electronic Control System.
- C:** A term used for the computer screen.
- D:** None of the above.

REF: F 59 PHI Operator's Manual, Section 1 page 1-12

54. The Display Diagnostic Panel (DDS) on an F59PHI locomotive can be used to cut out which of the following?

- A:** Alerter.
- B:** Speedometer.
- C:** Over speed.
- D:** Traction Motor(s).

REF: F 59 PHI Operator's Manual, Section 4 page 12-16

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55. On an F59PHI locomotive, which wheel slip correction system is the DEFAULT system?

- A:** Wheel Creep Control System.
- B:** Super Series Wheel System.
- C:** Both systems operate at the same time.
- D:** Default would only be applied when sanding.

REF: F 59 PHI Operator's Manual, Section 2 page 24

56. On an F59PHI locomotive, what indication will you receive if a hot support bearing is detected on the lead locomotive?

- A:** Wheel Slip indication blinking light.
- B:** 'HOT TM SUPPORT BEARING ON THIS LOCOMOTIVE' message on DDS screen.
- C:** No indication.
- D:** All of the above.

REF: F 59 PHI Operator's Manual, Section 3 page 22

57. If you have a blinking or continuously lit Wheel Slip light on an F59PHI locomotive, what action should you take?

- A:** Call the Transportation Manager for instructions.
- B:** Stop and inspect the train, making sure wheels are rotating.
- C:** Continue on until the next trackside detector.
- D:** Comply with supplemental instructions for wheel slip.

REF: F 59 PHI Operator's Manual, Section 3 page 22-24

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58. The F59PHI locomotive has its own separate HEP power plant. It is a:

- A:** four-cylinder gas motor (120 volts).
- B:** Caterpillar Model 3412 DITTA (480 volts).
- C:** None, uses the main diesel engine just like an F-40 locomotive.
- D:** Type 7 generator producing 660 volts.

REF: F 59 PHI Operator's Manual, Section 1 page 2

59. On the F59PHI locomotive, you should never crank the engine more than _____ to prevent thermal overload on the starter motor?

- A:** 10 seconds, unless equipped with the 'Engine Purge Bypass System'.
- B:** 20 seconds.
- C:** 30 seconds.
- D:** 40 seconds.

REF: F 59 PHI Operator's Manual, Section 3 page 9

60. When the F59PHI locomotive is connected to ground power, what is the proper position of the Layover Setting?

- A:** Local.
- B:** On-Line.
- C:** Layover ON.
- D:** Layover OFF.

REF: F 59 PHI Operator's Manual, Section 2 page 50

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61. If the ER/TMS/SPEED circuit breaker is open (deactivated) on an F59PHI locomotive, what systems will be cut out?

- A: Alerter.
- B: Speedometer.
- C: Event Recorder.
- D: All of the above.

REF: F 59 PHI Operator's Manual, Section 2 page 56

62. When the Engine Purge Bypass circuit breaker is closed on an F59PHI locomotive, what protection feature is eliminated?

- A: Two minute cool down cycle.
- B: Reduced Engine Cranking Cycle (six seconds).
- C: Waste Water Storage.
- D: Cooling Water Recovery.

REF: F 59 PHI Operator's Manual, Section 2 page 58

63. The F59PHI locomotive air compressor is shaft driven, connected directly to the main diesel engine. If the main diesel engine stopped running, this would cause:

- A: the compressor to stop.
- B: the compressor to continue to the next station.
- C: the main engine to continue turning the compressor shaft.
- D: none of the above.

REF: F 59 PHI Operator's Manual, Section 1 page 10

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64. When operating an F59PHI locomotive over a 'railroad diamond' at speeds above 25 mph with the throttle in run 5 or above, the engineer must:

A: reduce the throttle to 4 or less.

B: reduce the throttle to idle.

C: go immediately to run 8.

D: none of the above.

REF: F 59 PHI Operator's Manual, Section 3 page 20

65. When a F-59 PH engine will not load and the computer message is Traction Motor Flashover, what action is required?

A: Isolate locomotive, break traction motor selector seal, depress and rotate

B: Place isolation switch in RUN and check for load.

C: Call Mechanical.

D: A and B are correct.

REF: Metrolink Operator's Trouble Shooting Guide: page 15-16

66. When a PHI engine will not load and the computer message is Traction Motor Flashover, what action is required?

A: Isolate locomotive, go to computer display and press F3 'Main Menu'.

B: Arrow down to 'Traction cutout' and 'Select'.

C: Select 'Cutout', return Isolation switch to RUN and check load.

D: All of the above are correct.

REF: Metrolink Operator's Trouble Shooting Guide: page 17-19

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67. When a PHI engine shuts down, where are the faults displayed?

- A:** On the Engineers Control Panel.
- B:** On the HEP Control Panel.
- C:** On the Annunciator Panel and Computer Display Screen.
- D:** ON the Engineers Control Stand.

REF: Metrolink Operator's Trouble Shooting Guide: page 21

68. If a F-59 PHI main engine shuts down, and the crankcase overpressure light is on, what action is required?

- A:** Reset the Crankcase overpressure fault
- B:** Restart the engine and continue
- C:** Do not attempt to restart the main engine (Isolate Unit).
- D:** A and B are correct.

REF: Metrolink Operator's Trouble Shooting Guide: page 21-22

69. What is the purpose of the CAR DOOR OVERRIDE Switch?

- A:** To prohibit door operation.
- B:** To monitor locomotive doors.
- C:** Inhibit and allow Main Generator excitation.
- D:** To close car doors.

REF: F 59 PHI Operator's Manual, Section 2 page 48

METROLINK STUDY GUIDE

70. What is the F59PHI (800 Series) locomotive fuel capacity?

A: 1500.

B: 1800.

C: 4000.

D: 1250.

REF: F59 PHI Operator's Manual, Second Edition, Section 1 page 4

71. If the alarm bells sounds in the Cab Car due to an HEP problem on the locomotive, what indicates the HEP Engine is no longer supplying power to the train?

A: Car lights are off.

B: Car lights are on.

C: Engine won't Load.

D: A penalty brake application will occur.

REF: Metrolink Operating Trouble Shooting Guide Pg-2

72. If the alarm bells sounds in a Cab Car, and it is determined that the HEP on the locomotive is the cause, how do you know if it is a trainline problem?

A: Car lights are off.

B: Car lights are on.

C: Engine won't Load.

D: A penalty brake application will occur.

REF: Metrolink Operating Trouble Shooting Guide Pg-2

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73. If the alarm bell sounds, the HEP engine is running and the cars have lights, but no air conditioning on one end of the car, what action should be taken?

- A:** Check the Train Line Complete and HEP ON lights on the locomotive.
- B:** Find the side HEP light are off, break the seal and place HEP Cut-out switch up.
- C:** Depress the HEP On button.
- D:** All of the above.

REF: Metrolink Operating Trouble Shooting Guide Pg-2

74. If the alarm bell sounds, the HEP engine is shutdown and the Hot Engine light is illuminated, what actions are required?

- A:** Check the water level.
- B:** If water level is low the engine will not start.
- C:** Place selector button on Dual Bus.
- D:** A and B are correct.

REF: Metrolink Operating Trouble Shooting Guide Pg-2

75. If the HEP engine is shutdown, Hot Engine light is illuminated and water level is not low, what actions are required?

- A:** Restart the HEP engine.
- B:** Restart the main engine.
- C:** Cycle the Control Circuit Breaker and Start the HEP engine.
- D:** Call the MOC.

REF: Metrolink Operating Trouble Shooting Guide Pg-7

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76. If the HEP engine is shutdown, Low Oil Pressure light is illuminated, what actions are required?

- A:** Check the HEP Engine oil level.
- B:** Cycle the Control Circuit Breaker and Start the HEP engine.
- C:** Observe oil pressure stays above 20PSI.
- D:** All of the above are correct.

REF: Metrolink Operating Trouble Shooting Guide Pg-9

77. If the HEP engine is shutdown, 'Overspeed' light is illuminated, what actions are required?

- A:** Check MU Engine 'Stop' button is in 'RUN'.
- B:** Cycle the HEP Control Circuit Breaker.
- C:** Start the HEP engine.
- D:** All of the above are correct.

REF: Metrolink Operating Trouble Shooting Guide Pg-10

78. If the HEP engine is running, the cars have emergency lighting, but no air conditioning and the VOLT TRIP and FREQ TRIP fault lights are illuminated, what actions are required?

- A:** Call the MOC for another engine.
- B:** Lower the voltage.
- C:** Press the FAULT RESET, HEP ON and Alarm Silencer Button.
- D:** Restart the Main Engine.

REF: Metrolink Operating Trouble Shooting Guide Pg-12

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79. If the HEP engine is running, the cars have emergency lighting, but no air conditioning and the VOLT TRIP and FREQ TRIP fault lights are illuminated, what additional actions can be taken?

A: Press the Engine Stop, engine will idle for two minutes.

B: Cycle the Control Circuit Breaker.

C: Restart the HEP Engine and return to the control panel and depress HEP ON button.

D: All of the above.

REF: Metrolink Operating Trouble Shooting Guide Pg-13

80. If the HEP engine is running, the cars have emergency lighting, but no air conditioning and the 'HEP SYST GROUND' fault light is illuminated, what additional actions are required?

A: Cut out a traction motor.

B: Depress the 'Ground Fault Reset' button.

C: Depress the HEP ON button on the control panel.

D: B and C are correct.

REF: Metrolink Operating Trouble Shooting Guide Pg-14

81. On a MP-36 locomotive, what is the normal position of the HEP trainline setup switch when operating a Push/Pull train in pull mode?

A: LOCAL and Dual Bus.

B: Local Right Bus.

C: Local and Left Bus.

D: Trainlined and Dual Bus.

REF: Operators Manual Pg. 2-52

METROLINK STUDY GUIDE

82. On the MP-36 Locomotive what are the brake handle positions of the 30A-CDW automatic brake valve?

A: Release, minimum, suppression, full service, handle off, and emergency.

B: Release, minimum reduction, Full Service, suppression, handle off, and emergency.

C: Release, running, first service, lap, service, and emergency.

D: Release, hold, lap, service, handle off, and emergency.

REF: Operators Manual Pg. 1-36

83. What position must the Isolation switch be placed in on a MP-36 locomotive to start the main engine?

A: Run.

B: Start/Stop Isolate.

C: Jog.

D: Isolate.

REF: Operators Manual Pg. 2-18

84. After shutting down a MP-36 Locomotive what breaker on circuit breaker panel # 2 must remain on to provide lubrication?

A: Fuel pump breaker.

B: AUX Gen breaker

C: Turbo breaker.

D: Computer control breaker.

REF: Operators Manual Pg. 1-65

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85. After shutting down the main engine on a MP-36 Locomotive you must wait _____ minutes before opening the battery switch?

A: 15 Min.

B: 20 Min.

C: 30 Min.

D: 35 Min.

REF: Operators Manual Pg. 1-69

86. Where is the dead engine cut out cock located on a MP-36 Locomotive?

A: In the nose between the Air Brake equipment and side sheet metal of the short nose.

B: Under the floor using the right floor access panel.

C: Left side outside panel door to the right of the 26LU-L manifold panel.

D: Right side outside panel door to the right of the 26LU-L manifold panel.

REF: Operators Manual Pg. 1-70-71

87. When operating a MP-36 locomotive lite what indication is necessary on the Engineers control panel to achieve traction power?

A: Door Bypass.

B: DB cut out.

C: Air Comp.

D: Turbo Pump.

REF: Operators Manual Pg. 1-58

METROLINK STUDY GUIDE

88. On a MP-36 locomotive, if the Alertor (TMS) fails enroute and a penalty cannot be recovered, what must be cut out to recover?

- A:** Cut out magnet valve on right side next to 26 LU-L manifold.
- B:** Turn off Alertor/Event recorder breaker on # 1 engine control panel.
- C:** In short nose of locomotive, place toggle switch labeled 'cut-override' in ON position.
- D:** Cut out Alertor (TMS) pneumatic C/O located in the short nose.

REF: Operators Manual Page 1-53

89. On a MP-36 locomotive when using the QES-III CDU to cut out a traction motor, what additional option is available from the traction motor cut out screen?

- A:** Disable speed sensor.
- B:** Disable dynamic brake.
- C:** Disable maximum throttle notch 6 only.
- D:** Set up manual slipped pinion protection for cut out traction motor.

REF: Operators Manual Pg. 2-20

90. On a MP-36 locomotive when using the QES-III interface to cut-out a traction motor and speed sensor, what protection is lost?

- A:** Locked axle protection.
- B:** Wheel slip correction on all traction motors.
- C:** Ground relay protection on remaining motors cut-in.
- D:** Traction motor stall alarm is disabled on remaining traction motors cut-in.

REF: Operators Manual Pg. 2-20

METROLINK STUDY GUIDE

91. While operating a MP-36 locomotive and the QES III interface displays the message Low Oil PSI ENG Shut Down, what could be the cause?

- A:** Clogged Oil Filter.
- B:** Defective Lube oil Filter.
- C:** High Crank Case Pressure.
- D:** A Cracked Main Engine Block.

REF: Operators Manual Pg 3-16

92. On a MP-36 locomotive, what do the Phase Lights indicate on the HEP Control Panel?

- A:** The HEP plant is isolated from the 480 volt electrical system.
- B:** The HEP auxiliary engine is shuts down.
- C:** The HEP alternator is operating at the proper voltage.
- D:** That HEP faults are not reset.

REF: Operators Manual Pg. 1-79

93. On a MP-36 locomotive, how many Start Stations are there to start the HEP engine excluding the QES-III CDU?

- A:** 1
- B:** 2
- C:** 3
- D:** 4

REF: Operators Manual Pg. 1-48

METROLINK STUDY GUIDE

94. On a MP-36 locomotive, where are the Start Stations located to start the HEP engine?

- A:** On the Cab Remote Control Panel in the HEP room.
- B:** On the Relay Cabinet and Digital Genset 2020 Control System in the HEP room.
- C:** On the Relay Cabinet at the main engine start station.
- D:** On the HEP Remote Control Panel in the cab.

REF: Operators Manual Pg 2-48

95. On a MP-36 locomotive in the HEP room, what switch is recommended for stopping the HEP engine?

- A:** The HEP ENGINE STOP/RUN switch.
- B:** Digital Genset Control 2020 panel.
- C:** MU Shutdown.
- D:** Cab Remote Control Panel or HEP ENGINE STOP/RUN switch on the relay cabinet.

REF: Operators Manual Pg. 2-48

96. Where are the emergency fuel cut-off pushbuttons, for the main diesel engine located on a MP-36 Locomotive?

- A:** One on each side near the fuel fill.
- B:** One on the accessory rack of the main diesel engine.
- C:** One on the control panel in the cab.
- D:** All of the above.

REF: Operators Manual Pg. 2-46

METROLINK STUDY GUIDE

97. On the MP-36 locomotive how do you cut out a traction motor?

- A:** Isolate the engine.
- B:** Toggle switch on electrical panel.
- C:** Turn the cutout on the TMS in nose of the engine.
- D:** Isolate the engine and cut-out the traction motor from the QES III computer screen behind the engineer.

REF: Reference MP-36 Manual Page 2-20 Figure 2-8

98. On the MP-36 locomotive how do you start the main engine when it is not running and the AECS system is ACTIVE?

- A:** Move the Reverser to either Forward or Reverse.
- B:** Use the start station on the engine control panel in the cab.
- C:** Use the QES III computer screen located behind the engineer.
- D:** All of the above are correct.

REF: Reference MP-36 Manual Page 2-18

99. On the MP-36 locomotive how is a ground relay reset?

- A:** They can be cut out manually.
- B:** The MP-36 locomotive is reset automatically by the computer 1-3 times.
- C:** Pushbutton on the electrical panel.
- D:** Reset the counter in the electrical cabinet behind the engineer.

REF: Reference MP-36 Manual Page 2-22

METROLINK STUDY GUIDE

100. On the MP-36 locomotive how many emergency fuel cut-off switches are there?

A: 1

B: 2

C: 3

D: 4

REF: Reference MP-36 Manual Page 2-46

101. In order to have HEP Train Line Complete on Rotem Cab-Cars what must be done at the front of the Car?

A: Cab Car has an internal Loop Switch for 480 Volt T.L. Complete.

B: Cab car must have a Dummy Plug in Red 27 Point Receptacle.

C: Cab Car only needs one 480 volt cable looped for a T.L. Complete.

D: Cab Car needs both sides looped for 480 Volt T.L. Complete.

REF: Operators Manual

102. What pneumatic hoses must be coupled on the Rotem Cab-Car for normal operation?

A: Brake Pipe only.

B: Main Reservoir only.

C: Brake Pipe and Main Reservoir.

D: Brake Pipe and Actuating.

REF: Operating Manual

METROLINK STUDY GUIDE

103. What color is the communication jumper receptacle on a Rotem Cab Car and what is required to complete the Train Line communication?

- A:** Red and a Looping Plug.
- B:** Red and a Communication Jumper Looped.
- C:** Yellow and a Looping Plug.
- D:** Yellow and a Communication Jumper Looped.

REF: Operators Manual

104. When changing ends from a locomotive to a Rotem cab car in Push/Pull service, what four controls on the Engineer Side Panel must be activated to take control?

- A:** Headlight, Fuel Pump, Generator Field and Engine Run.
- B:** Cab Set-up, Fuel Pump, Generator Field and Engine Run.
- C:** Door Disable (Door By-Pass), Cab Key, Fuel Pump and Engine Run.
- D:** Zero Speed, Fuel Pump, Generator Field and Engine Run.

REF: Operators Manual

105. What are the positions on the Automatic Brake Valve C/O on a Rotem Cab Control Car?

- A:** Trail 24/26 – Lead Dead.
- B:** IN Test Out.
- C:** IN/OUT
- D:** Passenger FRT Test Out.

REF: Operators Manual

METROLINK STUDY GUIDE

106. What type of Automatic Brake Valve is used in a Rotem Cab Car?

A: modified 26 B1.

B: 26 L.

C: 30A-CDW.

D: 24 RLM.

REF: Operators Manual

107. What Pneumatic C/O's can be found in the equipment locker of the Rotem cab cars on the F-end?

A: TMS Alerter, ATS.

B: TMS (Alerter) Over Speed.

C: Horn, TMS, Alerter, Over Speed.

D: TMS (Alerter), Over Speed, ATS and Horn.

REF: Operators Manual

108. What must an Engineer do to return to radio communication, when a PEI audio / visual alarm is activated on a Rotem Cab Car?

A: Acknowledge the PEI, press the reset button.

B: The Alertor.

C: Press the PEI button to acknowledge, press the reset button, press VHF to return to radio control.

D: No actions is required because the PEI acknowledgment does not interfere with the radio communication.

REF: Operators Manual

METROLINK STUDY GUIDE

109. If a Wayside Detector detects a Hot Bearing on a Rotem Cab or Trailer Car, where should the Tempil Stick be used to check for a Hot Journal?

A: Stroke the outside surface of Journal Box.

B: Stroke the Roller Bearing Cap.

C: Stroke the Roller Bearing Seal Ring inside the wheel.

D: Stroke the Bearing Adapter where it comes through the truck frame near the Sensor.

REF: Operators Manual

110. The Exterior Indicator Lights located on Rotem cars indicate what information?

A: Clear (White), Emergency Valve used on car; Green, brakes released; Amber, brakes applied; Red, Smoke detector activated.

B: Clear (White), Door open; Green, brakes applied; Amber, brakes released.

C: White, Emergency Brake applications or door activation; Red, door open on a car; Amber, brakes set; White Red & Amber Flashing, smoke detector activated.

D: Amber, Emergency Brake application, or smoke detector activated; Red, door open on a car; Clear (White), brake application on car.

REF: Operators Manual

111. If an ATS Penalty Brake application occurs on a Rotem Cab Car, where is the ATS reset located?

A: On the Engineers Control Stand.

B: On the Engineers Side Panel.

C: In the F-end Equipment Locker on Intermediate Level.

D: Both A and C are correct.

REF: Operators Manual

METROLINK STUDY GUIDE

112. When setting up a Rotem Cab Car as a controlling Locomotive which switch permits control of the Locomotive from the Cab Car?

A: Fuel Pump.

B: Generator Field.

C: Engine Run.

D: Cab Set Up.

REF: Operators Manual Page 41

113. What are the Automatic Brake valve positions on a Rotem Cab Car?

A: Release, Minimum, Full Service, Suppression, Handle Off and Emergency.

B: Release, Minimum, Suppression, Full Service, Handle Off and Emergency.

C: Release, Minimum, Lap, Service, Handle Off and Emergency.

D: Release, Minimum, Running Service, Full Service, Handle Off and Emergency.

REF: Operators Manual

114. On the Rotem Cab Car, what does the door interlock switch function allow?

A: By passes zero speed signal.

B: Allows Locomotive propulsion when the train does not have a door closed status.

C: Zero speed indicator is illuminated when the door interlock switch is used.

D: When the TMS is defective it allows locomotive propulsion.

REF: Operators Manual

METROLINK STUDY GUIDE

ANSWERS

1. B

2. B

3. D

4. D

5. B

6. C

7. B

8. D

9. D

10. B

11. B

12. D

13. A

14. D

15. A

16. D

17. D

18. C

19. C

20. C

21. D

22. A

23. B

24. D

25. A

26. D

27. D

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28. D

29. A

30. C

31. D

32. C

33. D

34. C

35. D

36. B

37. A

38. D

39. A

40. D

41. C

42. B

43. D

44. B

45. D

46. A

47. D

48. D

49. D

50. C

51. D

52. D

53. B

54. D

55. A

56. B

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57. B

58. B

59. B

60. C

61. D

62. B

63. A

64. A

65. D

66. D

67. C

68. C

69. C

70. B

71. A

72. B

73. D

74. D

75. C

76. D

77. D

78. C

79. D

80. D

81. A

82. B

83. B

84. C

85. D

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- 86. D
- 87. A
- 88. D
- 89. A
- 90. A
- 91. C
- 92. C
- 93. B
- 94. B
- 95. D
- 96. D
- 97. D
- 98. D
- 99. B
- 100. D
- 101. D
- 102. C
- 103. A
- 104. B
- 105. C
- 106. C
- 107. D
- 108. C
- 109. C
- 110. C
- 111. D
- 112. D
- 113. A
- 114. B

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