
F59PHI STUDY GUIDE

1. The horsepower rating of the F59PHI locomotive is:

A: 2300

B: 3000

C: 4000

D: 4250

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

2. 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: Electronic governor.

REF: F 59 PHI Operator's Manual, Section 1 page 1-11

3. 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 1-09

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4. The F59PHI (450-470) has four fuel cells. To determine how much fuel is in each cell, you would check which of the following?

- A:** Fuel bypass sight glass.
- B:** Fuel tank Control Panel.
- C:** Fuel Monitor System.
- D:** Fuel tank gauge on the outside of the engine.

REF: F 59 PHI Operator's Manual, Section 2 page 2-102

5. On an F59PHI locomotive, which of the following would you use to manually transfer fuel from one cell to the other?

- A:** Fuel tank control panel.
- B:** Siphoning valve.
- C:** Low fuel pressure gauge.
- D:** The output active system does it automatically.

REF: F 59 PHI Operator's Manual, Section 2 page 2-107

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

- A:** Start the engine.
- B:** Slow the 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:** Remove air bubbles from fuel system.

REF: F 59 PHI Operator's Manual, Section 2 page 2-66

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7. 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 starter motor is cool to the touch.

REF: F 59 PHI Operator's Manual, Section 3A page 3A-8

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

- A:** 480 KVA.
- B:** 750 KVA.
- C:** 800 KVA.
- D:** 1100 KVA.

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

9. 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 2-87

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10. 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 the HEP diesel engine what would you need to do?

A: Hold the fuel prime valve lever (located on the right side of the AC cabinet), while holding FP/ES Switch in prime position.

B: Place FP/ES Switch in prime and hold for at least two (2) minutes.

C: Push start and hope it works.

D: Start main diesel engine first, then start HEP diesel engine.

REF: F 59 PHI Operator's Manual, Section 3 page 3B-2

11. 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: Engine Stop Button on HEP start station.

D: Both A and C.

REF: F 59 PHI Operator's Manual, Section 3 page 3B-8

12. 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 3B-8

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13. On an F59PHI locomotive, what is the BUS setting when working with California Equipment?

A: Single.

B: Dual.

C: Triple.

D: CA.

REF: F 59 PHI Operator's Manual, Section 3 page 3B-4

14. To prevent a penalty brake application from occurring on an F59PHI locomotive, the Alertor 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 3B-4

15. What is the Pilot Valve setting on the F59PHI, 2001-2009 series locomotive, when operating in Freight?

A: FRT.

B: PASS.

C: TEST.

D: Cannot be used in Freight service.

REF: F 59 PHI Operator's Manual, Section 3 page 3A-28

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16. 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 1-10

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

- A:** Alertor.
- B:** Speedometer.
- C:** Overspeed.
- D:** Traction Motor(s).

REF: F 59 PHI Operator's Manual, Section 1 page 4-10

18. 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 3 page 3A-23

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

- A:** Wheel Slip.
- B:** 'HOT TM SUPPORT BEARING ON THIS LOCOMOTIVE' message on DDS screen.
- C:** Audible alarm only.
- D:** BB C/0 and wheel slip light flash simultaneously.

REF: F 59 PHI Operator's Manual, Section 3 page 3E-6

20. If you receive a 'HOT TM SUPPORT BEARING ON THIS LOCOMOTIVE' message on an F59PHI locomotive, what action should you take?

- A:** Call the Road Foreman for instructions.
- B:** Stop and inspect the train, making sure wheels can rotate.
- C:** Continue on until the next trackside detector.
- D:** Contact train dispatcher, continue to next scheduled stop at reduced speed.

REF: F 59 PHI Operator's Manual, Section 3 page 3E-6

21. 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 P-42 locomotive.
- D:** Type 7 generator producing 660 volts.

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

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22. 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 3A page 3A-7

23. When the F59PHI locomotive is connected to ground power, what is the proper position of the HEP Source Switch?

A: Local.

B: On-Line.

C: Trainlined.

D: HEP would be in the 'ON' position.

REF: F 59 PHI Operator's Manual, Section 3 page 3B-4

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

A: Alertor.

B: Speedometer.

C: Event Recorder.

D: All of the above.

REF: F 59 PHI Operator's Manual, Section 2 page 2-64

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25. 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 2-66

26. 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 1-14

27. 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:** Keep throttle in notch 5 and apply a minimum brake application (braking with power applied).

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

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28. When Isolating diesel electric locomotives in a multiple unit consist, what is required when the consist has two (2) P-42 locomotives in the lead and an F-59 locomotive trailing?

A: Do not isolate any trailing units.

B: Do not isolate the F-59 unless the cab is occupied and monitored for wheel slip.

C: Isolate the leading P-42 only.

D: Do not exceed notch 6 when the F-59 isolated to prevent wheel slip.

REF: SGRFN 53

29. Shutting down a F-59 Locomotive will save how many gallons per hour?

A: 3.

B: 4.

C: 5.

D: 6.

REF: SGRFN 53

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ANSWERS	
1.	B
2.	A
3.	D
4.	C
5.	A
6.	B
7.	A
8.	B
9.	D
10.	A
11.	D
12.	C
13.	A
14.	D
15.	A
16.	B
17.	D
18.	A
19.	B
20.	B
21.	B
22.	B
23.	A
24.	D
25.	B
26.	A
27.	A

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28. B

29. A