

# Amtrak F40PH Locomotive Pack

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#### Version 2.0

## 1 Background

#### 1.1 EMD F40PH

The Electro-Motive Division F40PH is a 3000 horsepower (2.2 MW) B-B diesel-electric locomotive produced in the late 1970's and intended for service on Amtrak's intercity lines.

The F40PH features a turbocharged 645E3 16 cylinder, two-stroke, water-cooled diesel engine (prime mover) that develops 3,000 tractive horsepower (2.2 MW) at maximum rpm. The main (traction) generator converts mechanical energy from the prime mover into electrical energy that is distributed through a high voltage cabinet to the traction motors. Each of the four traction motors are geared to a pair of driving wheels. The gear ratio of the traction motors to wheel axle determines the maximum operating speed of the locomotive; a standard F40PH has a gear ratio which provides a top speed of 103 mph (166 km/h). Introduction of the F40PH series was spurred as a replacement for the EMD SDP40F type, Amtrak's first series of locomotives built new for them since inception in 1971.

It served for over 20 years as the flagship engine for Amtrak's passenger fleet until they were replaced by the P42 Genesis.

**Build Dates:** 1975- 1992 **Units Produced:** 398 **AAR Wheel Arr:** B-B **Cylinders:** V16

**Height above Rails:** 15ft 7.5in **Loco Brakes:** Straight Air

**Length:** 56ft 2in **Train Brakes:** Air

Weight: 260,000lb Engine Type Diesel Electric

Wheelbase: 9ft Power Output: 3,000hp Maximum Speed: 103 mph

# 2 Rolling Stock

The F40PH appears in Amtrak PhaseIII livery:

#### 2.1 EMD F40PH

This locomotive appears as "EMD F40PH Amtrak Phase III" in the editor browser list.



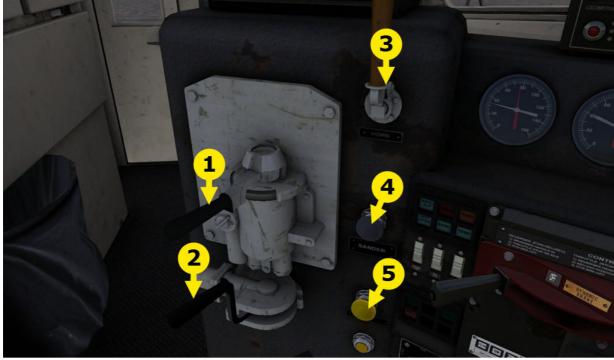
### 2.2 Superliner and Baggage Cars

This pack includes Superliner cars and a Baggage car in both Phase II and Phase III liveries





# **3 Cab Controls**







- 1. Auto Brake
- 2. Independant Brake
- 3. Horn
- 4. Sander
- 5. Bell
- 6. Dynamic Brake
- 7. Throttle
- 8. Reverser
- 9. Instrument Lights

- 10. Wipers
- 11. Headlights
- 12. Cab Light

#### 4 Scenarios

#### 4.1 F40PH Casino Commuter

Rating EasyDuration 20mins

Using the F40PH to make a short commuter run from Sparks to Reno. It is set at 11 pm and in a snow storm. Length is 20 minutes.

#### 4.2 California Zephyr - Sparks to Truckee

Rating MediumDuration 68mins

The California Zephyr travelling from Sparks to Truckee with a stop at Reno. You will be taking the full Zephyr with 2 F40PH engines and a consist of Superliners. It is an uphill drive, try to keep your timetable up with out speeding.

#### 4.3 California Zephyr - Truckee to Reno

Rating MediumDuration 54mins

California Zephyr - Truckee to Reno - Take the California Zephyr from Truckee to Reno. Another crew will pick it up at Reno. It is an easy downhill trip.

#### 4.4 Colfax to Rocklin - Dinner Train

Rating HardDuration 58mins

You are driving the last leg of the Dinner Train using an EMD F40PH. The trip is from Colfax Station to Rocklin Station. It is a downhill journey with grades of 1.5% to 2.5%. Good braking is a must. Try to maintiain the correct speed limits and passenger comfort.

#### 4.5 Rescue the Zephyr

Rating MediumDuration 30mins

The California Zephyr has broken down and is stranded 7 miles down the mountain and a blizzard is coming. Use 2 F40s to Rescue the Zephyr and bring the passengers to Truckee station before the blizzard comes through.

# **5 Acknowledgments**

We would like to thank the following individuals who created this Train Simulator Add-on Pack:

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