



dovetail
GAMES

GP40PH-2B

New Jersey Transit



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1 Background

1.1 Loco

The GP40PH-2B is a 3000 horsepower, diesel-electric locomotive built between 1993 and 1994. They are a variant of the GP40 with various modifications to allow for passenger services. In October 1968, 13 GP40Ps were built for the Central Railroad of New Jersey.

The initial change between the original locomotive and the 'P' variant was the addition of a steam generator that produced heat and electricity for the passenger coaches; this was stored in an extended flat end on the long hood. By 1983, New Jersey Transit was running these locomotives.

The GP40Ps were modified once more, removing the steam generator in exchange for a diesel HEP generator, following this the locomotives were reclassified as GP40PH.

In 1991 and 1992, NJT sent their GP40PH locomotives to once again be rebuilt, this time into GP40PH-2s. This meant they received the general upgrades a '-2' rebuild comes with, such as an improved modular electrical control cabinet, damping struts on the axle trucks, a sight glass for the engine water level on the rear upper right-hand side of the long hood, bolted battery box covers rather than hinged, high and low positioned classification lights on the rear with one set being blanked and an extended cab roof towards the rear of the loco as the electrical cabinet is increased in size.

NJT decided to order more GP40PH-2s, this time being converted straight from GP40s. One order of 6 was rebuilt by Morrison-Knudsen in 1993 and these became classified as the GP40PH-2A. The final order was rebuilt by Conrail in 1993-94. The 19 ex Penn Central GP40s became the GP40PH-2B.

1.2 Design & Specification

Builder	Electro-Motive Diesel
Vehicle Length	61'10" (18.86m)
Vehicle Power	3,000hp
Top Speed	90mph (145km/h)

2 Rolling Stock

2.1 GP40PH-2B



2.2 Comet IV



2.3 Comet V Cab Car



3 Driving the GP40PH-2B

3.1 GP40PH-2B Cab Controls



- | | | | |
|----|-------------------|----|-----------------------------------|
| 1 | Throttle | 11 | Number Lights |
| 2 | Reverser | 12 | Sander |
| 3 | Train Brake | 13 | Bell |
| 4 | Independent Brake | 14 | Acknowledge |
| 5 | Horn | 15 | Pantograph |
| 6 | Headlights | 16 | Speedometer |
| 7 | Ditch Lights | 17 | Engine Off/Engine On |
| 8 | Wipers | 18 | Main/EQ Reservoirs |
| 9 | Instrument Lights | 19 | Brake Cylinder/Brake Pipe |
| 10 | Step Lights | 20 | Application Pipe/Suppression Pipe |
| | | 21 | AMPS |

3.2 Cab Controls Comet V Cab Car



- | | | | |
|---|------------------------|----|---------------------------|
| 1 | Throttle/Dynamic Brake | 9 | Emergency Brake |
| 2 | Reverser | 10 | Acknowledge |
| 3 | Train Brake | 11 | Speedometer |
| 4 | Horn | 12 | Main/EQ Reservoirs |
| 5 | Headlight Switch | 13 | Brake Cylinder/Brake Pipe |
| 6 | Crossing Lights | 14 | Cab Light |
| 7 | Wiper Switch | 15 | Instrument Lights |
| 8 | Sander | | |

3.3 Locomotive Keyboard Controls

Key Equivalent	Action
D / A	Decrease or Increase Power Handle.
S / W	Move Reverser Control Forward or Backward.
: / @	Decrease or Increase the Auto Brake (Train Brake).
[/]	Decrease or Increase the Independent Brake (Locomotive Brake).
< / >	Decrease or Increase the Dynamic Brake.

3.4 General Keyboard Controls

Key Equivalent	Action
T	Load/Unload. Press once to load/unload passengers or freight.
H	Lights. Repeatedly pressing will cycle through headlight states where appropriate.
V	Windscreen Wipers. Press once to switch on and again to switch off.
Z	(Expert) Engine Stop/Start. By default engines will already be running at the start of a scenario. Press this button to stop and then again to restart the engine.
Q	(Expert) Alerter. The Alerter is a system used on some trains to ensure that the driver has seen a signal. If the alert sounds (a black/yellow striped symbol is shown on the Driver's display), this must be acknowledged by pressing the Alerter button or the emergency brakes will be applied.
X	(Expert) Sander. Causes sand to be laid on the rails next to the wheels to assist with adhesion. Press once to apply sand and again to stop.
Space	Horn. Press to sound the horn.
B	Bell. Press once to sound the bell.
/	Handbrake On/Off. This icon is displayed in the Coupling view.
Shift + Ctrl + C	Couple manually.

4 Scenarios

*****For driving tutorials, please visit the Academy from the main TS2016 menu screen*****

4.1 1. [GP40PH-2B] Unleashing the Beast

Step into the cab of this GP40PH-2B, #4213 bound for Long Branch.

Duration: 45 Minutes

Difficulty: Easy

4.2 2. [GP40PH-2B] Beast Mode!

Join GP40PH-2B #4207 at Rahway, part way through its service to Hoboken. A broken down express is about to pass you, being pulled by another GP40PH-2B. Expect delays from signals.

Duration: 40 Minutes

Difficulty: Medium

4.3 3. [GP40PH-2B] Taming the Beast

Waiting at Hoboken, you will soon be departing #4213 on its way to Bay Head. You'll be at the controls as far as South Amboy.

Duration: 55 Minutes

Difficulty: Medium

5 Acknowledgements

Dovetail Games would like to thank the following people for their contribution to the development of the GP40PH-2B.

Beta Testing Team

