



dovetail
GAMES

F40PH-2CAT

New Jersey Transit



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1 Background

1.1 Loco

Originally built as F40PH-2 units during the 1980s and based on Amtrak's famed F40PH. Featuring Head End Power (HEP) which was supplied from the main diesel power plant, the locomotives would generally operate at virtually full throttle when HEP was being supplied to the passenger set.

Needing to revitalise the F40PH-2 locomotives after a decade of intensive service, and wishing to implement a better HEP system, New Jersey Transit sent 17 of these locomotives to be rebuilt by Conrail's Juniata Shops in Altoona, Pa. A significant element of the rebuild was the addition of a 750hp CAT auxiliary diesel motor. This required additional space inside the carbody and it was extended, by 2 feet, over the locomotive's rear platform and additional grilles added.

New Jersey Transit utilised the rebuilt F40PH-2CATs on numerous of its routes including the North Jersey Coast Line, typically hauling single-level Commuter Stock. Four of the locomotives were subsequently transferred to Metro-North for "West of Hudson" services. In recent years, the NJT F40PH-2CAT units have been relegated primarily to work train services and, as of 2015, only two units are reported to remain in service.

1.2 Design & Specification

Builder	GM Electro-Motive Division
Locomotive Weight	260,145 lbs (118 tonnes)
Vehicle Length	56'2" (17.2m)
Vehicle Width	10'9" (3.3m)
Fuel Capacity	1,800 US Gal
Vehicle Power	3,000hp
Top Speed	110 mph (177 km/h)

2 Rolling Stock

2.1 F40PH-2CAT



2.2 Comet IV



2.3 Comet V Cab Car



3 Driving the F40PH-2CAT

3.1 F40PH Cab Controls





- | | | | |
|---|-------------------|----|-------------------|
| 1 | Dynamic Brake | 10 | Auto Brake |
| 2 | Reverser | 11 | Independent Brake |
| 3 | Step Lights | 12 | Horn |
| 4 | Throttle | 13 | Bell |
| 5 | Headlights | 14 | Sander |
| 6 | Acknowledge | 15 | Number Lights |
| 7 | Wipers | 16 | Ditch Lights |
| 8 | Instrument Lights | 17 | HEP Start up |
| 9 | Strobe Lights | 18 | HEP Shutdown |

3.2 Cab Controls Comet V Cab Car



- | | | | |
|---|------------------------|----|---------------------------|
| 1 | Throttle/Dynamic Brake | 9 | Emergency Brake |
| 2 | Reverser | 10 | Acknowledge |
| 3 | Train Brake | 11 | Speedo |
| 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.
Tab / Ctrl + Tab	Request authority to pass a signal at danger.

4 Scenarios

*****For driving tutorials, please visit the Academy from the main TS2015 menu screen*****

4.1 [F40PH-2CAT] 1. To Catch a Ferry

You take charge of a F40PH-2CAT passenger service. After allowing passengers to board in Woodbridge you'll be travelling to Newark Penn before finishing up in Hoboken.

Duration: 30 Minutes

Difficulty: Easy

4.2 [F40PH-2CAT] 2. Bay Head

You take charge of the F40PH-2CAT, taking a stopping passenger service down to Bay Head from Long Branch.

Duration: 40 Minutes

Difficulty: Medium

4.3 [F40PH-2CAT] 3. New Jersey Nights

Welcome to New Jersey Nights! This is where you will take a passenger service from Bay Head to Long Branch. There may be disruptions on the line tonight, due to engineering works and the weather.

Duration: 40 Minutes

Difficulty: Very Hard

5 Acknowledgements

Dovetail Games would like to thank the following people for their contribution to the development of the F40PH-2CAT.

Beta Testing Team

