



Class 66 Diesel Locomotive Pack 02 Add-on



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1 Background

1.1 Class 66

When British Rail's freight operations were privatised in 1996, "English, Welsh and Scottish Railway" (EWS) bought a large proportion of British Rail's freight operations. Many of the locomotives that EWS inherited were at the end of their useful life and EWS approached General Motors Electro-Motive Division (EMD), to supply a replacement. EMD offered their JT42CWR model which incorporated General Motors' version of (self-steering) bogies that reduce flange wear, improve adhesion and reduce track load. The locomotive design uses standard EMD components of its era including D43 traction motors. The new JT42CWR locomotives were finally given the Class 66 designation in the British classification system (TOPS). Two hundred and fifty were initially ordered and built in London, Ontario, Canada.

In 1998, Freightliner placed an order for locomotives. They were followed by GB Railfreight, and then Direct Rail Services. More recent orders for additional locomotives have seen the introduction of low-emission variants and other operators such as Colas Rail now utilise a number of locomotives.

The Class 66 design has also been introduced to Continental Europe where it is currently certified for operations in Germany, the Netherlands, Belgium, Luxembourg, Sweden, Norway, Denmark, France, and Poland. They currently operate on routes between Sweden and Denmark and between Germany, Belgium, The Netherlands and Poland.

1.2 Technical Specification

| | |
|-----------------------------------|------------------------|
| TOPS Number | Class 66 |
| Wheel Arrangement | Co-Co |
| Weight | 126 tonnes |
| Height | 12ft 10in (3.91m) |
| Length | 70ft ½in (21.34m) |
| Width | 8ft 8¼in (2.65m) |
| Bogie Wheel Base | 13ft 7in (4.14m) |
| Bogie Pivot Centres | 43ft 6in (13.26m) |
| Wheel Diameter | 3ft 6in (1.06m) |
| Minimum Curvature | 4 chains (80.46m) |
| Engine Type | GM 12N-710G3B-EC |
| Engine Output | 3,300 hp (2,460 kW) |
| Power at Rails | 3,000 hp (2,238 kW) |
| Maximum Tractive Effort | 92,000 lb (409 kN) |
| Continuous Tractive Effort | 58,390 lb (260 kN) |
| Design Speed | 87.5 Mph (141 km/h) |
| Maximum Permitted Speed | 75 Mph (121 km/h) |
| Brake Type | Air, Westinghouse PBL3 |
| Braking Force | 68 tonnes |
| Traction Alternator | GM EMD AR8 |
| Traction Motors | GM EMD D43TR |
| Number of Traction Motors | 6 |

2 Locomotive and Rolling Stock

The following items are included in this DLC pack.

2.1 Freightliner Class 66 Locomotive



2.2 FEA-B Spline Container Wagon



The FEA-B comprises two intermodal wagons permanently coupled via a bar coupling to form one twin wagon pair. The wagons have a strong steel spine, side pieces with standard twist locks and the outer ends of each wagon have conventional buffers and screw couplings.

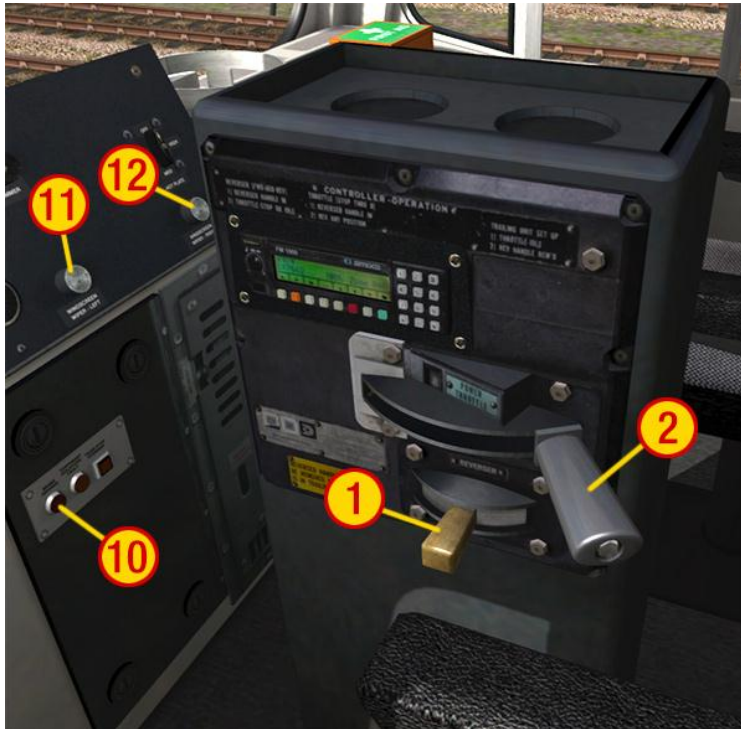
The inner ends of the wagons have a simple bar coupler. Twist locks are provided to accommodate combinations of 20', 30' & 40' ISO containers. The vehicle rides on Y33LSS840 bogies (840mm diameter wheels). Maximum wagon speed is 75mph.

2.3 KTA Pocket Container Wagon



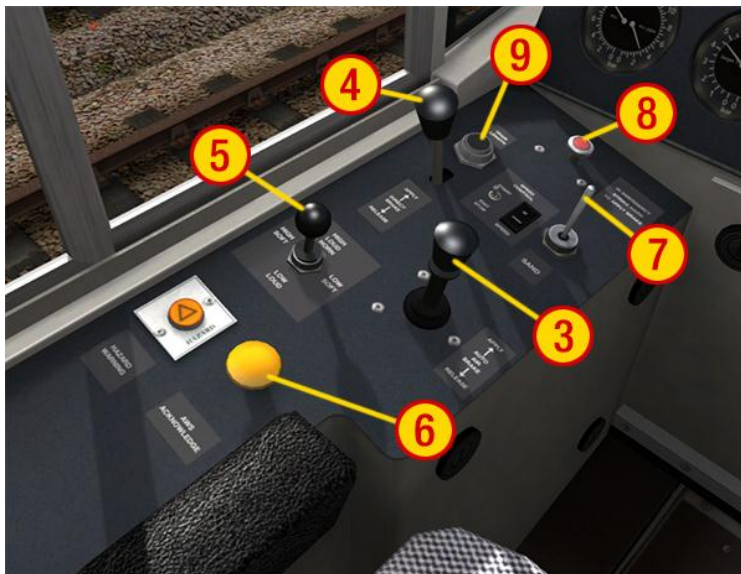
The KTA wagon was specifically designed to permit the carriage of 9ft 6in tall containers (Highcube) within the UK loading gauge. With a distinctive slab-sided design, the wagons were initially used only on domestic Freightliner services. Later they were renumbered into the private-owner series. The method of carrying containers earned them the nickname "Pocket Wagons".

3 Class 66 Cab



- 1 – Reverser
- 2 – Throttle
- 3 – Train Air Brake Lever
- 4 – Loco Air Brake Lever
- 5 – Horn Lever
- 6 – AWS Reset
- 7 – Sand Lever
- 8 – Emergency Brake Plunger
- 9 – Train Length Button
- 10 – AWS/TPWS Brake Lamp
- 11 – Left Wiper Switch
- 12 – Right Wiper Switch

Note: The Train and Loco Brake levers (3&4) are not used when Train Simulator Driving Model is configured for "Simple Mode" under Game Settings. Under this setting the throttle and brakes are controlled together from the Throttle Lever (2)



- 13 – Passenger/Goods Brake Timing Switch and Indicators
- 14 – Parking Brake Buttons
- 15 – Engine Start/Stop Buttons
- 16 – Main Reservoir Gauge
- 17 – Bogie Brake Cylinder Gauge
- 18 – Air Flow Indicator
- 19 – Brake Pipe Pressure Gauge
- 20 – Speedometer
- 21 – Alternator Output Gauge
- 22 – AWS Indicator





- 23 – Cab Light Switch
- 24 – Instrumentation Light Switch
- 25 – Headlight/Taillight Switch
- 26 – Headlight/Taillight Proving Panel

3.1 Brake Levers

Both the Train Air Brake and Loco Air Brake levers have three functional positions:

- In the upright position they “Hold” the current brake pressure
- When pulled fully back they gradually “Release” the brakes
- When pushed fully forwards they gradually “Apply” the brakes

The Train Brake lever is centre sprung both in the cabin and on the game HUD and the Loco Brake lever is only sprung forwards for brake application and can be left resting in the “Release” position when required.

When using the Train Brake lever a target brake pressure can be selected as indicated by the outer needle on the Brake Pipe Pressure Gauge. The actual brake pressure will then gradually change to match the selected target as shown by the larger inner needle.

The rate that the brake pressure changes is dictated by the brake timing selection (“Passenger” or “Goods”) as selected and indicated on the main console (item 13 shown on the previous page). When in “Goods” brake timing mode the brake pressure changes more slowly.

3.2 Additional Keyboard Controls

| | |
|-------------------------------------|-----------------------------|
| L – Toggle Cab Light | SPACE – Horn High |
| CTRL+L – Toggle Instrument Lights | CTRL+SPACE – Horn High Soft |
| U – Toggle Train Length Button | B – Horn Low |
| Y – Toggle Pass/Goods Brake Timing | CTRL+B – Horn Low Soft |
| V – Toggle Left Wipers Switch | |
| CTRL+V – Toggle Right Wipers Switch | |

4 Scenarios

The following scenarios for our Edinburgh to Glasgow route have been included:

4.1 Cadder Misty Morning (Easy)

Starting from Cadder Yard near Glasgow you are bringing Intermodal freight to Larbert in preparation for onwards movement. Be advised of a 30MPH speed restriction through Greenhill.

4.2 Keeping Out of the Rush (Medium)

You are departing with Intermodal freight out of Grangemouth, through Greenhill, to Cadder Yard. The main line between Edinburgh and Glasgow is experiencing heavy traffic so you will be routed into the passing loops at Greenhill and Gartshore to allow priority services to pass.

4.3 Intermodal Run Around (Hard)

You are running an Intermodal freight service from Grangemouth to Edinburgh. This involves running your Class 66 around the 8 FEA wagons at Grangemouth and Larbert before continuing to Edinburgh Waverley for a crew change.

5 Acknowledgements

RailSimulator.com gratefully acknowledges the assistance Oovee Ltd. in creating sounds and simulation for this locomotive.