76 Ton Diesel Breakdown Crane Manual

1. Background

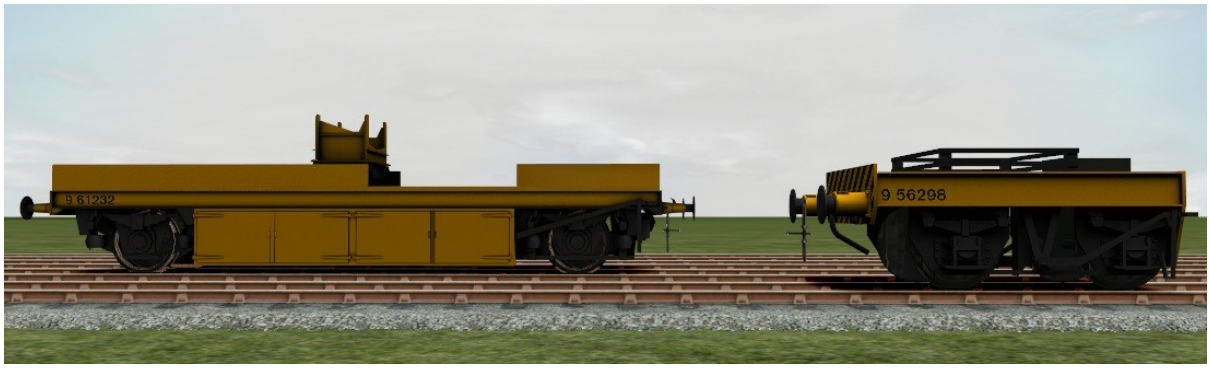
The introduction of heavy diesel locomotives as part of the modernisation plan generated a requirement for higher capacity breakdown cranes, existing breakdown cranes having a capacity of only 45 tons. Twelve 75 ton (76 tonne) capacity cranes were therefore ordered from Cowans Sheldon of Carlisle, they were steam powered. The crane modelled in this pack represents the ten converted from steam to diesel hydraulic power at BR Derby Works between 1976 and 1978. Today five are understood to be preserved at various heritage railway sites, the remainder have been scrapped.

2. Pack Contents

The package adds:

- The 76 Ton Diesel Hydraulic Crane

- Its associated Jib Truck (left below) and Crane Runner



- A Tool Van based on a British Railways GUV

- An animated derailed HEA hopper wagon

- There is also a Route, Crane Setup, with a Free Roam scenario and a scenario named Crane Re-Railing Trial to demonstrate the re-railing procedure.
- A custom Key Mapper is included, installed in "....Kuju\RailsimCore\Inputmappers".

3. **Driving and Operating the Crane**

The crane can be moved along the track by driving it using the same procedure and keys as any other diesel loco, this will work whatever Control Model option is selected in RailWorks. You can also perform crane operations, for example lifting and slewing the jib, but to do this the **Expert** Control Model **must** be selected in RailWorks Gameplay options. These movements require the Crane to be **selected** and you to be in **Cab View** (key 1). In Cab View you will be positioned outside the crane and the view can be changed by using the mouse and left / right and up / down arrow keys as you would in a conventional Cab View.

The following keys operate the crane:

K.... Jib Raise

L.... Jib Lower

M.... Hook Raise

N.... Hook Lower

U.... Slew Left

P.... Slew Right

I.... Hook Rotate Left

O.... Hook Rotate Right

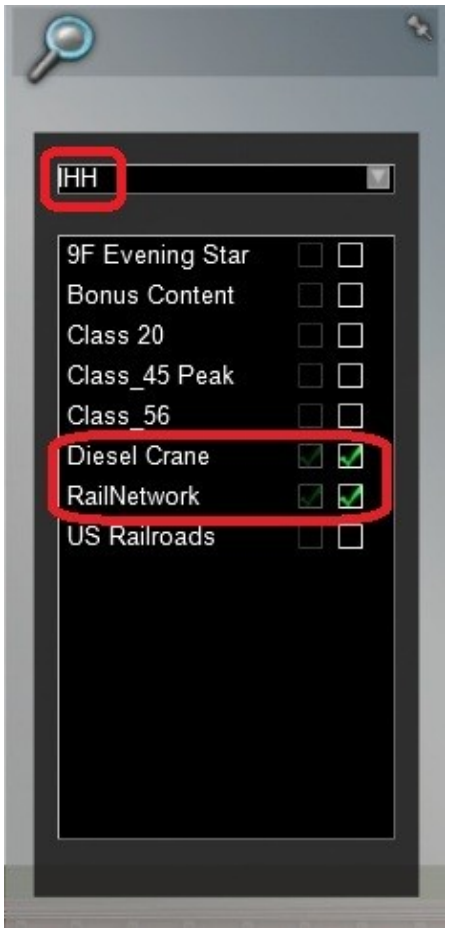
V.... Attach / Detach Lifting Beam

/.... Raise / Lower Outrigger Jacks

The animated derailed HEA wagon is technically a transfer point that will re-rail when "T" is pressed, provided one of the crane trucks is level with it. If it doesn't re-rail try moving the crane slightly backwards or forwards. Note that the due to the way RailWorks operates the crane can't actually lift anything but by careful operation of the crane controls and pressing "T" at the right time a convincing re-railing operation on the HEA can be simulated.

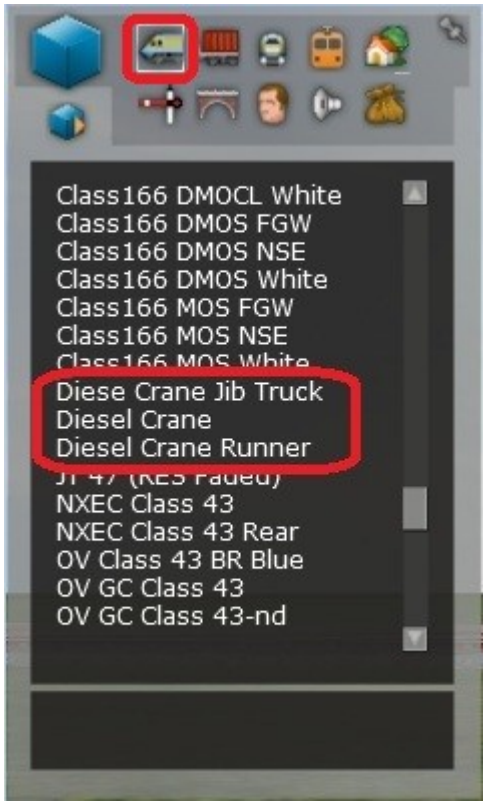
4. **Placing the Crane in a Scenario**

First Select "IHH" and "Diesel Crane" in the Object Set Filter.



(Note that "RailNetwork" is also selected here but not really necessary)

The vehicles can then be placed in a scenario using the scenario editor in the normal way. The crane and its trucks are found in the Engines and Tenders button list on the browser tab and the Tool Van is under the Rolling Stock button:



A few points to remember when creating a scenario:

- The trucks are 'handed'. The runners need to have their buffers facing away from the crane itself and the cut out on the sides of the jib truck needs to be nearest to the crane.
- Two runners are required, one either side of the crane.
- If you don't place a driver on the crane it won't be operable!

Correctly assembled it should look like this:

5. Numbering

The cranes were numbered in the series 96700 – 96709 and each was allocated to a specific motive power depot as marked on the cab under the number. The number and depot can be set in the scenario by double clicking on the crane and editing the details in the pop out box on the right of the screen:

The number must contain five digits and the name must be eleven characters long. Use "#" to pad out the name to make it the right length.

The default list of numbers is:

96701#GATESHEAD#

96702###YORK###

96703##THORNABY#

96704###TOTON###

96705##SALTLEY##

96706###CANTON##

96707OLD#OAK#COM

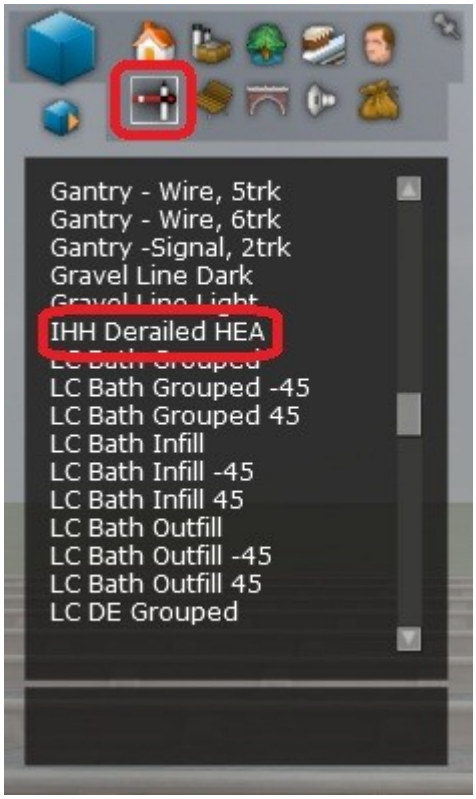
96708#HAYMARKET#

96709DEVON##ROAD

6. Using the Derailed HEA Wagon in a Scenario or Route

As mentioned above the animated derailed HEA is actually a transfer point and currently can't be used as a piece of scenario specific scenery. It must therefore be placed using the World Editor. Neither can it be coupled to and moved like an item of rolling stock so give some thought to where it's going to go otherwise it might end up blocking a running line. In the World Editor select "IHH" and "RailNetwork" in the Object Set Filter as shown below.


IHH
9F Evening Star
Bonus Content
Class 20
Class_45 Peak
Class_56
Diesel Crane
RailNetwork


Gantry - Wire, 5trk
Gantry - Wire, 6trk
Gantry -Signal, 2trk
Gravel Line Dark
IHH Derailed HEA
LC Bath Grouped -45
LC Bath Grouped 45
LC Bath Infill
LC Bath Infill -45
LC Bath Infill 45
LC Bath Outfill
LC Bath Outfill -45
LC Bath Outfill 45
LC DE Grouped

The wagon will then appear in the Track Infrastructure button list, the signal icon, on the browser tab as shown above right. Its default position is derailed so line up one of the wheel sets on the track and the other off to one side and lower. Make sure the link, see image below, is facing the track on which the crane will be otherwise it won't re-rail. Adjust the link with the mouse if necessary. To fine tune the wagon's position run the scenario, re-rail it and enter the world editor. The wagon will stay in the re-railed position and you can then accurately line it up with the track. Save and exit RailWorks. The wagon will then properly align with the track after re-railing when the scenario is run.