

Class 86 Overhead Electric Locomotive

IMPORTANT INSTRUCTIONS

Please read before using the model

THIS MODEL NEEDS LIGHT OILING BEFORE USE:

Whilst this model has been lubricated at manufacture, it is required that you add a small amount of oil directly into the exposed gears on the underside of the chassis following the diagram below. There are several brands of synthetic oil in the market and your local model shop will be able to advise you.

IMPORTANT NOTES:

Failure to oil may affect any warranty claim. Please use caution when applying oil as some types can cause damage to plastic. If oil touches the body then immediately wipe off using a non-fluffy cloth. No part of the motor requires lubrication. Do not operate the model on track laid onto carpet as the dust and fibres will impare the mechanism.

POWER TYPES (DC) and OPERATION:

If you wish to run the model on standard DC - then do nothing. Our PCB will automatically recognise you have a DC controller and will allow operation at normal DC requirements. * **PLEASE NOTE:** When using standard 12v DC power, it is important that you use an appropriate 'N' gauge controller as '00' controllers will not allow the measure of control required for our super-fine 'N' motors.

POWER TYPES (DCC) and OPERATION:

Our model is fully DCC Ready. The model is fitted with a DCC board which features a 6-pin NEM socket pre-fitted with a DC 'Blanking Plug'. Carefully remove the blanking plug and insert the decoder of your choice. The PCB also has a solder table for those wishing to hard-wire their decoder. Before converting to DCC please ensure that your decoder will fit the model, as some decoders are large and could have a thick protective outer shroud. A list of compatible decoders can be found within our annual catalogues.

To expose the PCB, simply unclip the body from the chassis using finger pressure. Fit your decoder and programme as normal.

PANTOGRAPH:

Whilst this model has been fitted with a metal Pantograph, the Pantograph is a purely cosmetic feature. The Pantograph will open and extend to a prototypically correct height but is not intended to act as a conduit for any external power source. Care must be taken to avoid low structures when the Pantograph is extended.

WARRANTY:

Dapol Ltd will remedy any defect or malfunction occurring with the set during a period of six months from the date of purchase. This guarantee does NOT extend to defects or malfunctions caused by damage or unreasonable use, including failure to provide correct lubrication. If for any reason the model develops any fault within the warranty period, please return it to **THE PLACE OF PURCHASE** with your **PROOF OF PURCHASE** (till receipt / credit card slip etc). Do **NOT** return it to Dapol Ltd. The seller will then, if appropriate, return it to Dapol Ltd under their agreed returns policy. Without a suitable proof of purchase Dapol Ltd cannot guarantee to offer any warranty service. The Dapol warranty is given in addition to all legal rights of the purchaser under the 'Sale of Goods act' and shall expire six months from the date of purchase. Dapol Ltd shall not be responsible for any consequential loss or damages arising in regard to any Dapol Ltd product.

PLEASE NOTE:

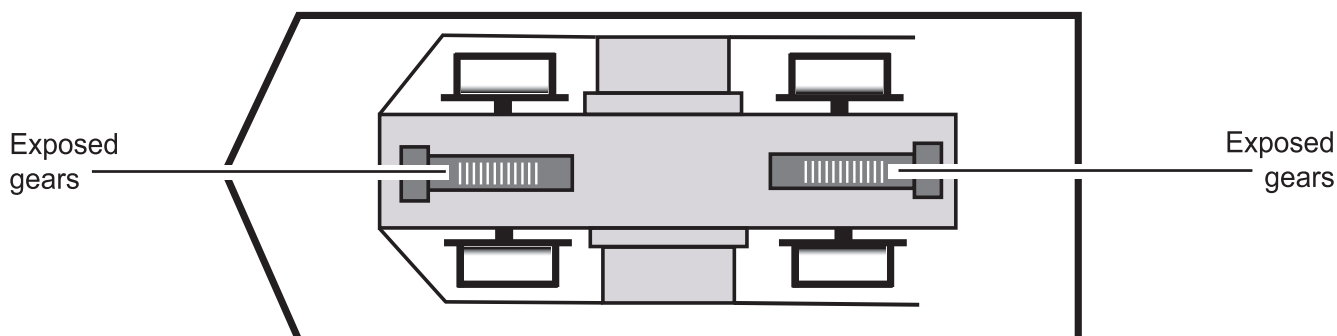
Models modified in ANY way outside of these written instructions (excluding the fitting of Dapol supplied parts) will not be covered under our warranty terms.

EUROPEAN REGULATIONS:

Dapol products conform to WEEE and RoHS requirements. If you have a need to dispose of any electrical part, please do so correctly.



OILING: Please oil into the exposed gears as shown on the sketch.



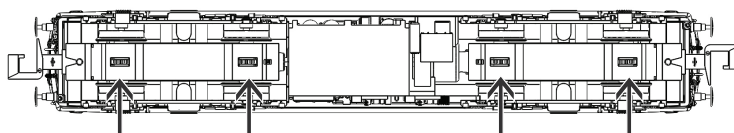
Class 86

IMPORTANT INSTRUCTIONS

Please read **BEFORE** using this model

THIS MODEL NEEDS LIGHT OILING BEFORE USE:

Whilst this model has been lubricated at the manufacturing stage, it is required that you add a small amount of oil directly onto the exposed gears on the underside of both bogies. There are several brands of synthetic oil available on the market such as Dapoil, your local model shop will be able to advise you.

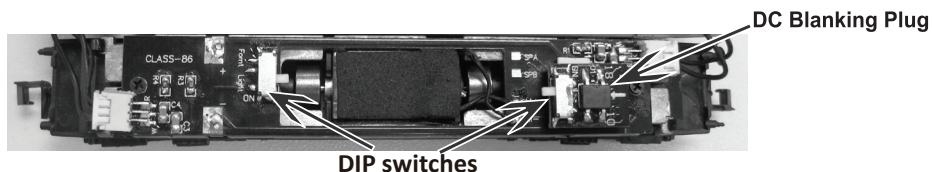


Normal Oiling points into exposed gears without removing body

Failure to oil may affect any warranty claim. Please use caution when applying oil as some types can cause damage to the plastic the model is made from. If oil touches the body then immediately wipe off using a non-fluffy cloth. No part of the motor requires lubrication. Do not operate the model on track that is laid onto carpet as the dust and fibres will impair the mechanism.

DC OPERATION:

If you wish to run the model on standard DC – then do nothing. Our PCB will automatically recognise that you have DC controller and will allow operation at normal DC parameters. You can turn the front & rear lights off by pulling the DIP switches to the 'OFF' position.



DCC OPERATION:

Our model is fully DCC ready. The model is fitted with a DCC board which features a Next 18 plug pre-fitted with a 'blanking plug'. Carefully remove the blanking plug and insert the decoder of your choice. Before converting to DCC please ensure that your decoder will fit the model, as some decoders are large and could have a thick protective outer shroud. To expose the PCB, simply pull the body away from the chassis using finger pressure. Fit your decoder and programme as normal. Reclip the roof.

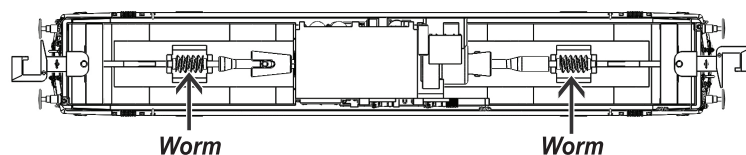
We have designed this model to have independent control of front and rear lamps. For best operation, we recommend a 4 function (or greater) decoder is fitted (for example a 6 function Dapol Imperium Next-18) to your model. If you have purchased the Dapol factory fitted decoder it has been fitted with a pre-programmed Imperium decoder (Please refer to separate DCC operation instructions supplied). If fitting a decoder (including a non-factory fitted Imperium) you will need to consult the decoder manual to correctly configure the decoder for operation of the locomotive lighting.

For reference, the model's lighting assignments are below:

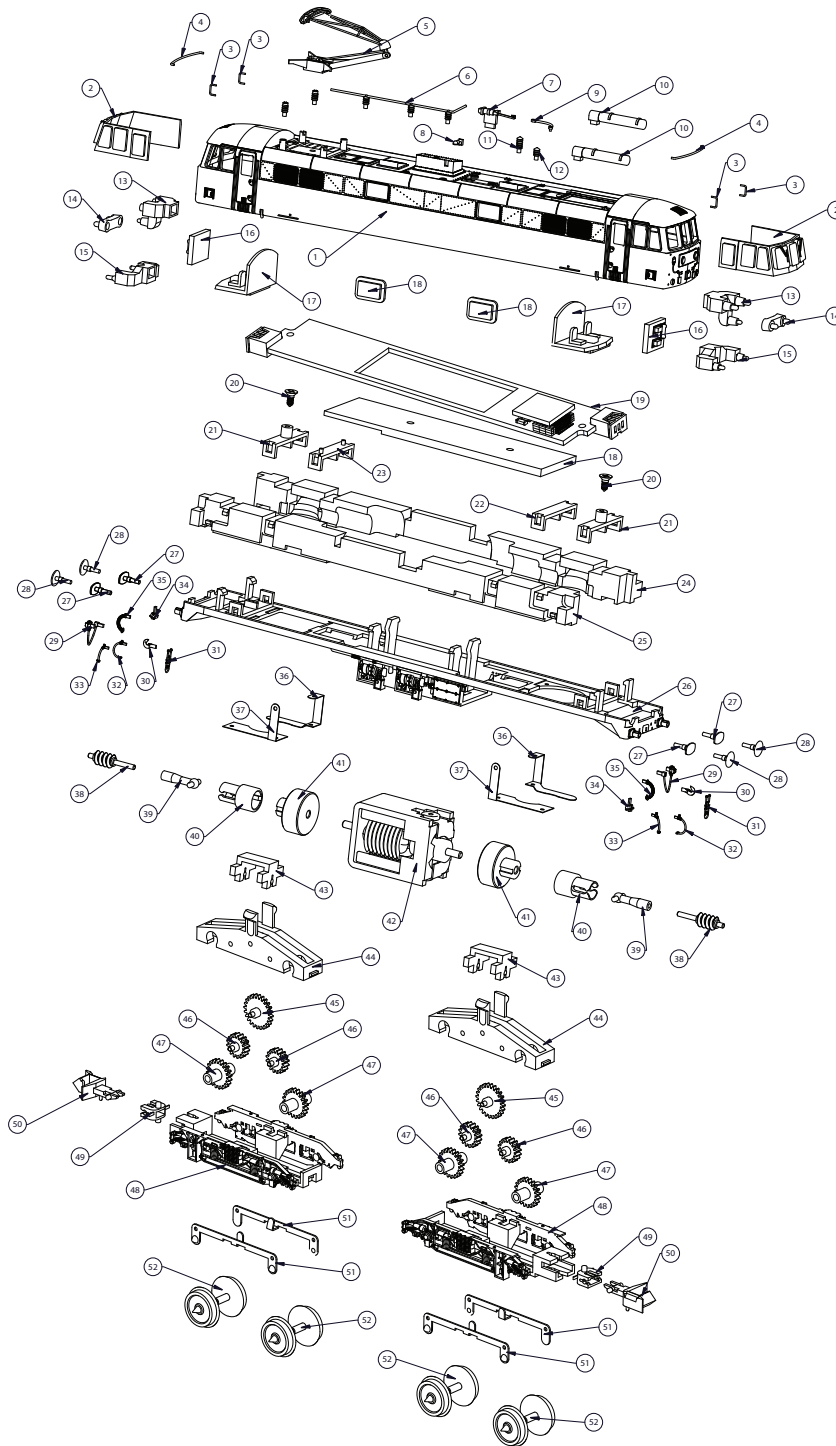
Decoder output	Front light (FLf)	Rear Light (FLr)	AUX 1	AUX 2	AUX3	AUX 4
Lighting	Front white lamps	Front red lamps	Rear white lamps	Rear red lamps	No connection	No connection

Routine Maintenance:

To expose drive worms and chassis for routine maintenance, simply pull the complete bogie assembly away from the chassis. The bogies are a 'pull-out' & 'push-in' fitting method. When refitting, ensure that the gear on top of the bogie tower meshes with the worm.



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COUPLINGS:

The model comes supplied with standard 'Rapido' couplings fitted, these can be changed to the Buckeye couplings supplied separately with your model simply by gently pulling the existing coupling from the N.E.M. pocket and inserting the alternative coupling. Dapol's magnetic couplings can also be fitted.

WARRANTY: Please refer to separately provided warranty paperwork for details

EUROPEAN REGULATIONS:

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Lighting functions and DCC installation



Your new model features DCC lighting functions allowing separate control of front lamps and rear lamps. DC lighting functions operate with front and rear lamps illuminating red or white as appropriate (using the supplied and pre-fitted blanking plate). This information sheet describes the operation with the factory fitted DCC operation and advice on how to program your own decoder for use with this model.

DC operation:

The model operates in a traditional way: Front and rear lights which operate directionally. i.e. White and red lamps change colour when the loco reverses direction. The interior lights are ON. Please note that the brightness of the lights will vary depending on the speed setting of your controller. Lights will not operate when the model is stationary.

DCC Operation:

If you are installing your own decoder please note the information in the 'Installing your own decoder' and 'Functions available by decoder type' sections below.

Factory fitted DCC:

The loco address is 3. Factory fitted DCC versions are pre-programmed to operate the lighting prototypically.

If you perform a factory reset, please reset the CVs listed in the 'Decoder setup' section below.

DCC Functions:

F0 – Light loco operation: Front and rear lights illuminate appropriately in the direction of travel

F1 – Multi-unit operation (Front set No. 2 end facing 2nd set) No. 1 end lamps only illuminate (White forwards, red reverse) No. 2 end lamps are off.

F3 – Multi-unit operation (Rear set No. 1 end facing 2nd set) No. 2 end lamps only illuminate (White forwards, red reverse) No. 1 end lamps are off.

Installing your own decoder:

Firstly, remove the DC blanking plate (the small PCB) and install the DCC decoder of your choice. For full operation, we recommend a next-18 6-function decoder: imperium.dccsupplies.com part number **113213**
OR from Dapol at: <https://www.dapol.co.uk/Imperium%202-Next18-18-pin-6-function-decoder> Please refer to the notes below for function operation with other types of decoder.

Decoder Setup:

No changes are required for the factory fitted version, but *if you perform a decoder reset or install your own decoder, then you will need to configure the CVs* (please refer to your controller handbook). If you are installing an NMRA compatible 6 function decoder of your choice; these CVs can be used as a guide for programming, please check with your decoder manual that the CVs are relevant for your decoder. Lighting allocation to decoder output is also shown below to assist in self-installing and programming your decoder.

Decoder Factory reset (imperium decoders): CV8 = 4

N.B. This will remove the factory setup from your decoder and it will need to be reprogrammed as described in 'CV Settings' below.

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Lighting functions and DCC installation



Functions available by decoder type fitted (N.B. Dapol Imperium are 6 function types):

- 2 function decoders: No. 1 end lamps, White and Red operation only
- 4 function decoders: No. 1 and No. 2 end lamps Red/White operation.

Decoder output functions:

- FOF – No.1 end white lamps
- FOR – No. 1 end red lamps
- Aux 1 – No. 2 end white lamps
- Aux 2 – No. 2 end red lamps

CV settings (Dapol Imperium 18 pin 6 function decoder. NMRA standard):

CV33 = 5

CV34 = 6

CV35 = 18

CV36 = 17

CV49 = 0 CV50 = 16

CV51 = 16

CV52 = 0

54 = 32

Using these CV settings, it is recommended to program both powered and dummy units together.

To control rear lamps with F2:

In response to requests from customers whose controller does not allow F2 to latch, we have not used F2 as a factory setting for rear lamp control. If you wish to use F2 to control the rear lamps program CVs 35 & 36 to the following values:

CV35 = 10, CV 36 = 9

Using these CV settings, it is recommended to program both powered and dummy units together..

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