Class 142
IMPORTANT INSTRUCTIONS
Please read BEFORE using this model

dapol
Model Railway Company

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 of the wheelsets. There are several brands of synthetic oil available on the market such as Dapoil, your local model shop will be able to advise you.
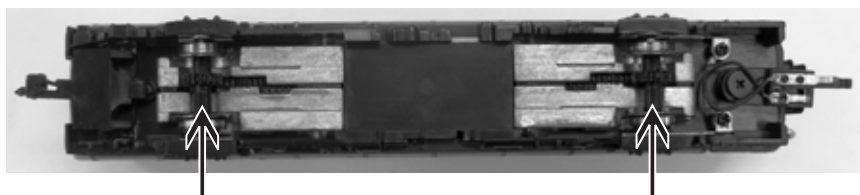
Normal oiling points into exposed gears without removing body

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. *Please Note:* when using standard 12v DC power, it is important that you use an appropriate 'N' gauge controller as 'OO' controllers do not allow the measure of control required for our super-fine motors.

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 body.

When using DCC, two decoders are required. The lighting of the front and rear cars is independently operated. To all the same address to be used the non powered cars lights are operated by aux1 (white) and aux 2 (red). The decoder in this car will need to be programmed to operate these functions directionally and map to the function key of your choice. Factory fitted models are already correctly programmed.

LIGHT BARS:
This model is "Light Bar Ready". The Dapol Light Bars operate on both DC and DCC power without any external modification. Instructions for fitting Dapol Light Bars are contained within the packaging of the Light Bar packs.
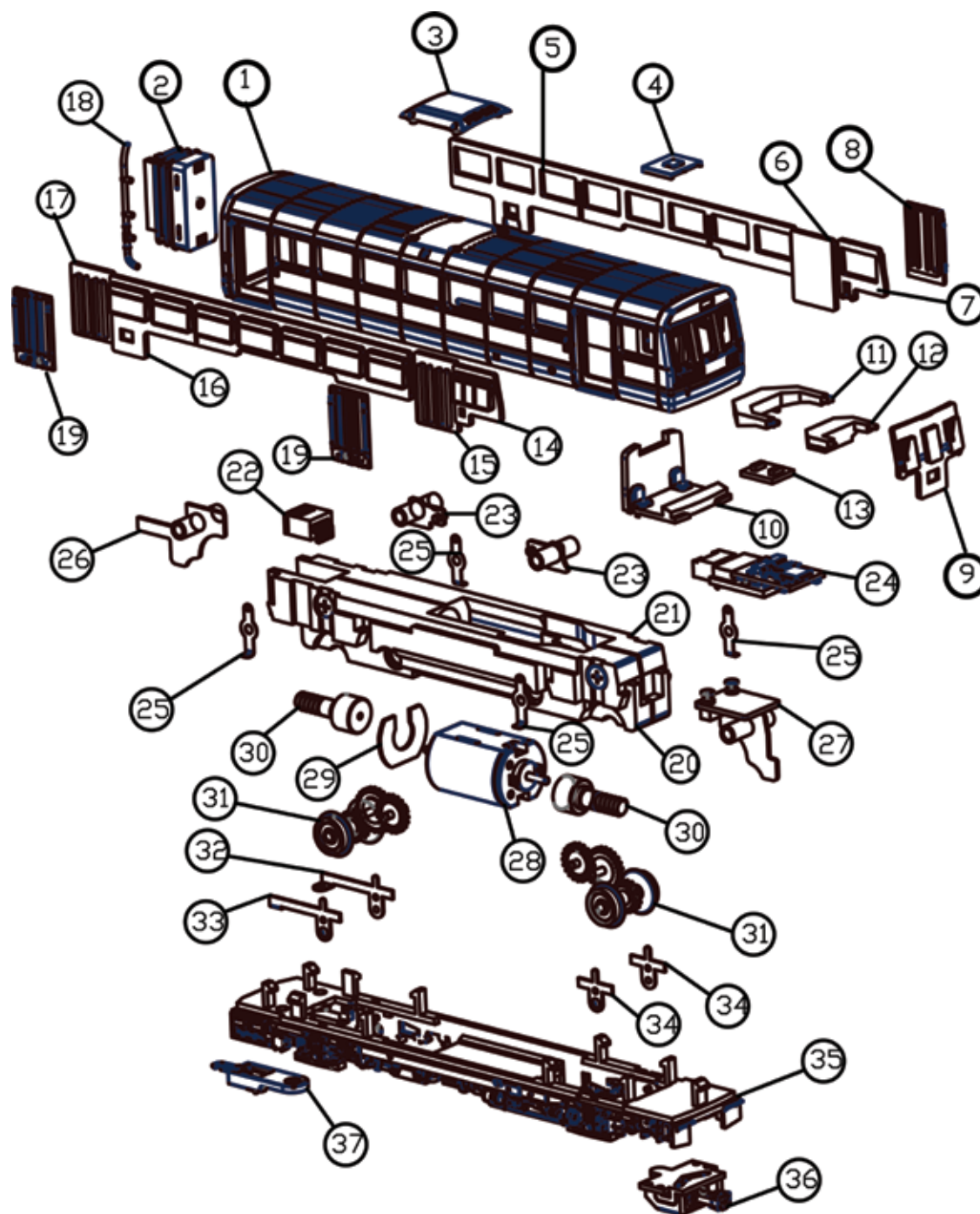
Please note the position of Light Bar Socket.

Light Bar Socket

DC Blanking Plug

Class 142

COUPLINGS:

The model comes supplied with standard ' Scharfenburg ' couplings fitted, these can be changed to the Buckeye coupli 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.

Accessory Parts:

Two sets of the Buckeye couplings & one set of the Dapol's magnetic couplings are supplied in plastic bags.

WARRANTY:

Please refer to separately provided warranty paperwork for details.

EUROPEAN REGULATIONS:

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

CE WEEE **RoHS** 2002/95/EC

N Gauge Class 142

Lighting functions and DCC installation

Your new model features DCC lighting functions allowing separate control of front lamps, rear lamps and light bar (if fitted). 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 – Single set operation: Front and rear lights illuminate appropriately in the direction of travel

F1 – Multi-set 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-set 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.

F4 – Passenger lighting control (If light bars are fitted).

Dimming Lamps:

Lamps are factory set to maximum brightness. If required, they maybe dimmed using the following CVs:

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 6-function decoder (i.e. Dapol Imperium 21 pin, imperium.dccsupplies.com part number **113187**) Please refer to the table below for function operation with other types of decoder. P*lease note that if programming the dummy car only, it is likely that your controller may return an error. Please check your controller manual for information on programming un-motored vehicles.*

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

N Gauge Class 142

Lighting functions and DCC installation

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.

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.
- 6 Function decoders: As 4 function decoders plus interior lighting operation.

Decoder output functions:

Dummy unit
- F0F – No.1 end white lamps
- F0R – No. 1 end red lamps
- Aux 4 – interior light control

Dummy unit
- Aux 1 – No. 2 end white lamps
- Aux 2 – No. 2 end red lamps
- Aux 4 – interior light control

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

CV33 = 5	CV35 = 18	CV49 = 0	CV51 = 16	54 = 32
CV34 = 6	CV36 = 17	CV50 = 16	Cv52 = 0	

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

www.dapol.com.