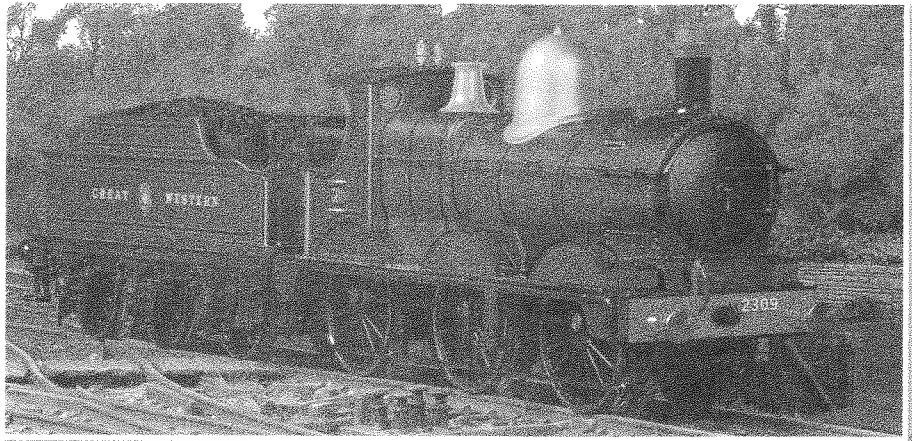




## Class 2301 Dean Goods Locomotive Operation & Maintenance



In 1877 William Dean became the Chief Locomotive Engineer of the Great Western Railway after the untimely death of his predecessor, Joseph Armstrong. William Dean had been with the GWR since the age of fifteen and had worked closely with Joseph Armstrong for many years. At this time the ill-fated broad gauge was still in use although it was fast being replaced with the adopted 'standard gauge'. Several GWR classes of locomotives were capable of being converted to standard gauge amongst them were several which had been designed by Dean himself.

Prior to Armstrong's demise, along with converting some of the broad gauge locomotives to standard gauge, the GWR had focused on producing a series of 0-6-0 locomotives with fitted tanks but Dean recognised the need for an 0-6-0 tender locomotive and in 1883 the first of the 2301 class was produced at the GWR Swindon Locomotive Works. These new locomotives broke with the GWR tradition and were fitted with inside frames and were also shorter than similar GWR engines of the period. In total there were 260 Class 2301, or "Dean Goods" built between 1883 and 1889, with the first twenty being constructed with domeless boilers, flush smokeboxes and clackboxes.

There were several construction variations within the whole class with several being built with double frames. Later various changes and improvements were also made which included the fitting of Belpaire Fireboxes and superheaters.

The Dean Goods proved to be just as dependable when seconded during a time of war. Towards the end of the First World War, in 1917, 62 of the class were obtained by the Railway Operating Division (ROD) to work in France. In 1918, 14 of the 62 were sent to Salonika, of which eight managed to survive and be returned to the UK while two of the class were sold to the Ottoman Railways, one of which remained in service until the 1950's. After the end of the War the remaining 46 were returned to the UK where they became part of the GWR once again.

During the early stages of the Second World War, 100 Dean Goods were requisitioned from the GWR by the War Department which in turn created a locomotive shortage problem for Great Western, so much so that they had to bring back into service several of the class that had been withdrawn from service prior to the War. Records show that 79 Dean Goods were shipped over to France at the beginning of the Second World War, however during hostilities several were destroyed while others became the spoils of war and were absorbed into the German occupying forces transportation system. Sadly after the end of the Second World War only 30 Dean Goods were repatriated. A number of the original 79 were sold to China while three travelled to Russia with one of the three, which at one time had been part of the Austrian railways was finally returned there some years later. What remained of the original 100, six were sent to Tunisia finally ending up in Italy. Of those that were eventually returned to the UK at least 30 were declared unusable and were scrapped.

An evolution of the Class 2301 was the Collett Goods 2251 class which was introduced in 1930 specifically to replace the Dean Goods, however 54 Dean Goods class locomotives lasted through until 1948 when they were absorbed into the then newly nationalised British Railways. These 54 remained in service for several years afterwards but by December 1957 all of these remaining locomotives had been totally withdrawn from service.

Only one of the Class has survived into preservation with that locomotive being No. 2516 and is now part of the National Collection and at the time of writing is currently on display at STEAM - the Museum of the Great Western Railway.

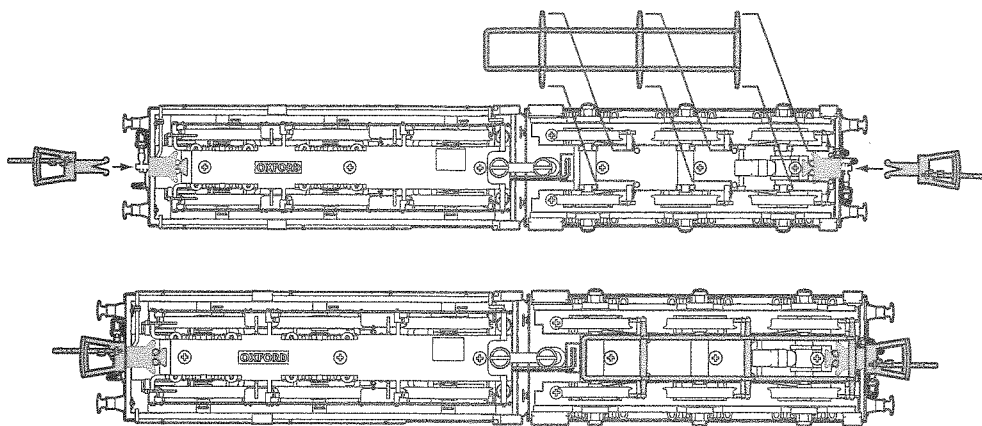
00 Gauge Railways - 1:76 Scale

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Oxford Rail locomotives are precision built using the highest quality components. If treated with reasonable care and with regular maintenance, the locomotive will give many years of

good service. Please read the contents of this operation and maintenance sheet to ensure the best possible performance from your locomotive.

## Fitting Brake Rodding & Couplings



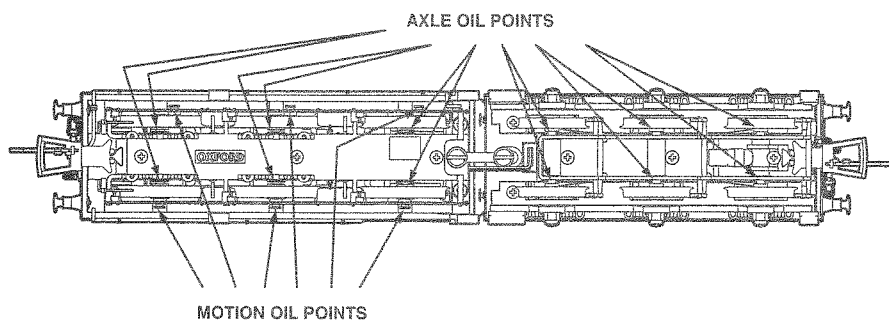
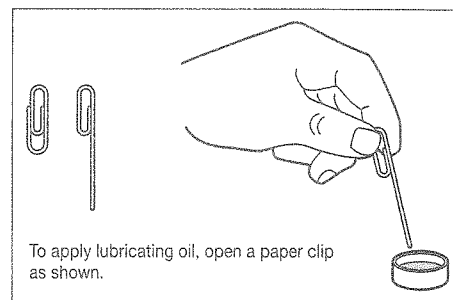
## Running In Period & Locomotive Lubrication

Oxford Rail locomotives are carefully engineered scale models and as such require a gentle running in period to be completed prior to normal operating conditions to achieve best results and optimum performance from all working parts.

Do not operate your locomotive on track which has been laid directly on to carpet as the fibres from the carpet or pet hairs can foul the locomotive's working parts such as the motor or gears and may also wrap around the axles.

The locomotive will require periodic routine maintenance. After approximately 24 hours of operation the locomotive will require some light lubrication to maintain the locomotive in top operating condition. DO NOT use household lubricants as they can damage the locomotive. Ensure that you only use a recommended light engineering oil such as 3 in 1. Ensure that the oil is only applied to the moving parts as shown on the diagram below using an opened paperclip. DO NOT apply oil to the motor itself.

Any excess oil that may come into contact with the locomotive body should be removed immediately as this could damage the locomotives paint or decals.



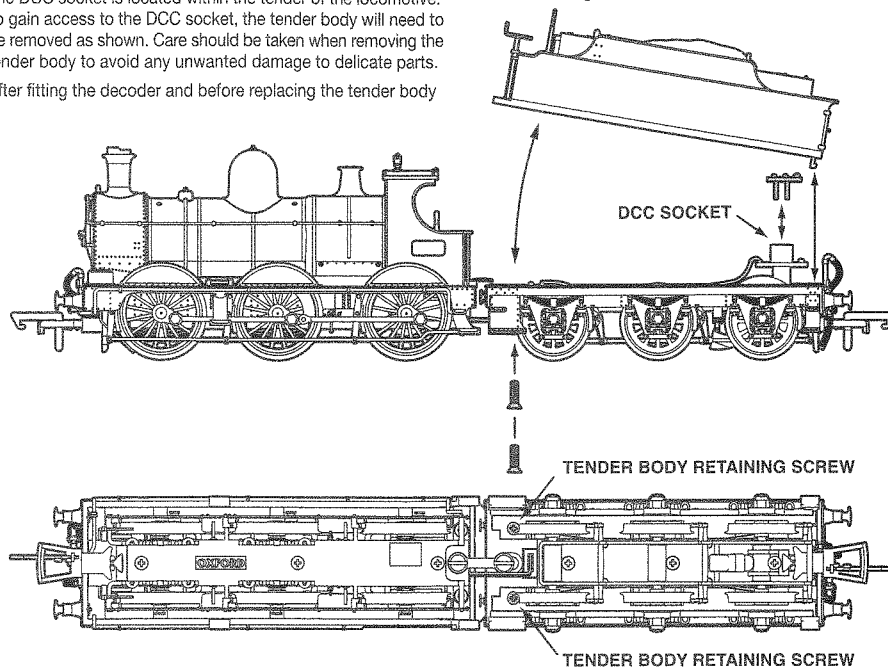
## Removal of Locomotive body & DCC Socket location

If your intention is to install a DCC decoder in to your locomotive, it is important to ensure that the locomotive operates correctly as a DC locomotive prior to DCC installation.

The DCC socket is located within the tender of the locomotive. To gain access to the DCC socket, the tender body will need to be removed as shown. Care should be taken when removing the tender body to avoid any unwanted damage to delicate parts.

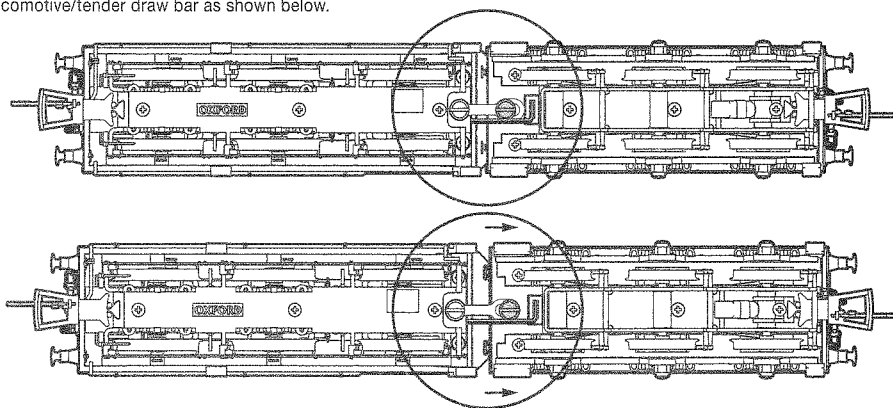
After fitting the decoder and before replacing the tender body

test the locomotive to ensure that you have installed the decoder correctly. Once you are satisfied that the model is running perfectly replace the tender body. Do not over tighten the tender fixing screws.



## Locomotive/Tender Draw Bar Adjustment

The Oxford Rail Class 2301 Dean Class locomotive is designed to operate on a 1st radius  $\pm 371\text{mm}$  curved section of track. If required, the gap between the tender and the locomotive can be slightly adjusted by a simple adjustment of the locomotive/tender draw bar as shown below.



## Hints & Tips

### Locomotive will not run.

If your locomotive does not respond properly to the power controller or runs poorly, please check the following points:

1. Ensure that the power controller is switched on and that all electrical contacts are made correctly and are secure.
2. If a power connecting clip or power track is used, please ensure that the connection to the track is correct.
3. Ensure that all track sections are fitted together correctly and that all 'fishplates' are tightly fitting to all other rails.
4. The locomotive is sitting with all wheels on the track.
5. Check that the power controller is set to operate in one direction or the other and not in the centre 'OFF' position.
6. Ensure that all of the locomotive's wheels and moving parts are free from household dust, fluff and dirt accumulation. Any build up should be gently removed using a pair of fine tweezers.

### Track Cleaning.

During normal operating conditions, the track on all model railway layouts accumulates dirt and dust on the running surface of the rails which can be transferred to the locomotive's wheels and electrical pick ups.

Should a build up of dirt be allowed to accumulate, it can cause a locomotive to lose traction and ultimately cause power loss to the locomotive's motor.

It is therefore essential to keep the track and locomotive's wheels absolutely clean to ensure smooth running and reliability by using a track cleaning rubber which can be purchased from any good model shop.

### Locomotive body maintenance.

Oxford Rail locomotive bodies are spray painted overall with printed decals and many separately fitted components.

Do not use any solvent type agents to clean the locomotive's body or to remove any marks or greasy stains, as this will damage the locomotive's body decoration.

The locomotive body can be kept clean if needed by gently buffing using a dry, soft, lint free cloth.

### Television Suppression.

Oxford Rail locomotives should not interfere with your television or radio when in operation. Should interference occur, it may be due to the close proximity of your layout to receivers or ariels and their 'downlines'. In this case, the layout will need to be moved further away to rectify this issue.

## Important Safety Notes.

Please read these operation and maintenance instructions prior to operating your locomotive.

This locomotive is not suitable for children under 14 years. It contains small parts which can present a choking hazard and some components have functional sharp points and edges.

Please handle this product with care.

This locomotive is intended for indoor use only.

This locomotive must not be connected to any other device other than a recognised model railway transformer.

## Railway Controllers.

Modern electronics included in our locomotives may not be compatible with certain older model railway controllers.

The 'Half Wave' switch on any controller (but mainly found on the H&M Clipper and Duette) should never be used as this will eventually cause the locomotive circuitry to overheat and eventually fail.

Due to their low cost circuitry, budget train set controllers may cause excessive motor noise during operation.

We at Oxford Rail always recommend a good quality, modern train controller for satisfactory use of our locomotives.



Designed In the UK by Oxford Diecast Ltd, PO Box 62, Swansea SA1 4YA.

00 Gauge Railways - 1:76 Scale

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