

GWR Prairie locomotive

OO Gauge Model

Owner's manual

dapol

Authentic Scale Model

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History

Thank you for purchasing this Dapol product.

A history of the GWR Prairie (2-6-2)

Developed from one of George Jackson Churchward's innovative designs and built by the Great Western Railway (GWR). The class evolved through several derivatives and rebuilds which resulted in various derivative classes: The Churchward 3100/5100, 3150, 5101, Collett 3100, 6100 and 8100 were built from 1903 onwards. The classes soon became known as 'Large Prairies' (after the wheel formation of 2-6-2) and distinguishing them from the similar GWR class 4400 & 45xx 'Small Prairies'.

Designed by G.J. Churchward for (dependent upon class) suburban passenger, commuter and banking uses. During latter years they were not uncommonly found in mixed traffic use and continued operating under British railways which resulted in appearances throughout the Western region.

At the time of writing several locomotives from the 5101 and 6100 classes are either statically preserved, undergoing rebuild or in regular preservation use.

GWR Prairie Specification

Specification:

- Diecast metal chassis
- Diecast wheels, motion and connecting rods
- Sprung centre driving wheels
- Sprung bogie frame, with 2nd radius ability
- Front pony cam mounting
- Sprung buffers
- Pickup from all 6 driving wheels
- Brass bearings
- DCC Ready (Next-18)
- 'Toolless' DCC decoder and speaker fitting
- Diecast footplate
- Body detailed to authentically represent operating number and its operating period
- Highly detailed cab interior
- Firebox flicker effect

Dapol are producing models from the following GWR build lots
(at the time of writing)

Date built	Lot number	Loco Numbers
1929-30	257	5101 – 5110 & 5150 - 5159
1930-31	259	5160 – 5189
1931	269	6100 - 6129
1932-33	278	6130 - 6159
1934	284	5190 - 5199
1935	291	6160 - 6169
1935-36	292	4100 - 4119
1936-37	313	4120 - 4129
1939	323	4130 - 4139
1946	335	4140 - 4149
1947	361	4150 - 4159
1948-49	369	4160 - 4179

GWR Prairie Quick start

Please read this section before you go any further!

Quick start: *We know you would like to have your model running as quickly as possible; please spare a moment to read this section first.*

- An accessory pack containing a coupling and PCB tool is supplied.
- Models fitted with optional DCC or DCC sound will operate on DC or DCC*
* When operating on DC, the sound fitted model will produce exhaust sounds automatically.

Icons used in this booklet:



Information: Hints and tips



Caution: Take care when performing this step



Warning: A risk of damage may exist

The model is packed in a two-part blister pack. Please unpack as below. *Please re-pack in the same way before sending for warranty or service*

Unboxing

- 1) Remove the model whilst in its clear packaging from the foam insert.
- 2) Slide the outer clear shell from the inner clamshell.
- 3) Lift the clamshell 'latch' (top right of package).
- 4) Carefully lift the locomotive from the packaging.

An accessory pack is supplied with your model containing the following items: (See *fitting of accessory items* for further detail)

- 1 x Hook and loop coupling

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- 1 x Smokebox door / PCB tool
- DC Blanking PCB (If Sound or DCC fitted)

Operation:

1. **Running in / First use:** No special running in or initial lubrication is required; our 'new generation' locomotives have been designed with care to offer many years of service with minimal maintenance.



We suggest a performing a check run in both directions using either DC or DCC power is performed before placing into service.



A DCC or DCC sound fitted model will 'autodetect' and operate on both analogue (DC) and DCC layouts.



DCC address is factory set to address #3.
The sound decoder fitted is a Zimo MX658N18 or a Dapol imperium for DCC fitted versions.

If operating a DCC fitted model on DC, please follow the DC operating procedure for your decoder.



Caution: A Non-DCC fitted model will not operate on a DCC controlled track.

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Maintenance:

The model uses components which require little maintenance. We suggest that the drive train and gear box are lubricated after every 100 hours running using a light synthetic lubricating oil such as Dapoil or Locolube™

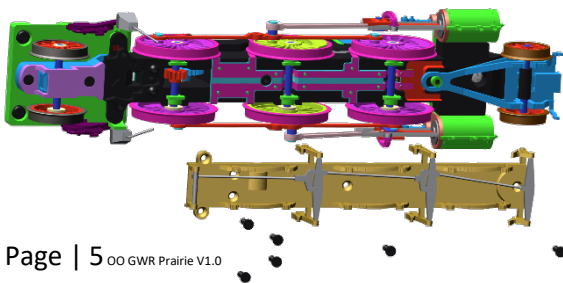
⚠ Warning: Mineral oil types or thicker oils may damage your locomotive paint finish or components and invalidate your warranty.

i Remove any surplus or spilt oil immediately using a lint free cloth.

i Regularly check your model for build-up of dust or loose scenic material around moving parts.

⚠ Caution: Do not over oil. Over oiling may damage paint finishes and/or cause build-up of dust.

- Lubrication can be applied to axle bearings and connecting rods without removing covers. Use only 1 small drop of oil on each point.
- To lubricate the worm gear, there is no need to remove the brake rodding. Remove the 6 keeper plate cover screws (shown below).
- Place 1 or 2 drops of oil on the large rear gear, this will migrate through the gear train to the worm during operation.
- Whilst the keeper plate is removed check the pony truck slide to ensure no build-up of debris is apparent. If found to be dry, then a little light grease can be used on the mounting post.



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Fitting of accessory items:

Couplings: The model is fitted with one hook and loop style coupling to the rear bogie with a second in the accessory pack. Both pony truck and rear bogie are fitted with NEM coupling boxes, permitting exchange for any compatible NEM style coupling.

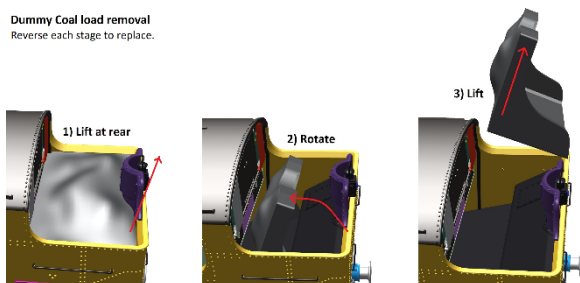
Number Plates: The model has printed plates applied to the cab sides. Two etched plates are provided in the accessory pack which can be fitted using a small amount of adhesive using the (slightly undersize) printed plates as a guide.

All other accessories are factory fitted to the model.

Bunker Coal Load: The bunker coal load is removable and lifts out in the following way

i Use of the smokebox door tool to assist removal without marking the finish.

Dummy Coal load removal
Reverse each stage to replace.



A detailed representation of the coal hopper profile will be found beneath the dummy coal load, allowing you to custom fill the bunker to the level you require using the material of your choice.

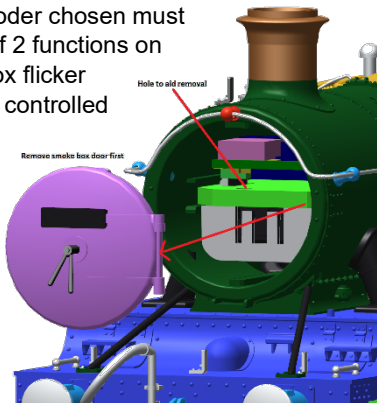
GWR Prairie Class

Installing a DCC decoder (DCC Ready)

Dapol recommend a Dapol Imperium decoder. The decoder chosen must offer a minimum of 2 functions on order for the firebox flicker to operate. (this is controlled by the AUX 1 output of the decoder).

This model is fitted with Dapol's tool-less DCC and speaker fitting system. To

install a decoder and/or optional speaker follow these steps:

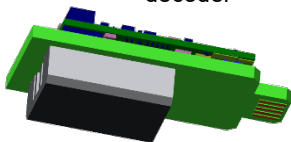


- 1) Remove the smokebox door. This is a friction fit, (use the wedge end of the smokebox door tool under the hinge if required.)



i The smokebox door tool is made from soft plastic, which avoids scratching the paint finish.

- 2) Using the 'hook' end of the smokebox tool to engage with the hole in the PCB (highlighted white), pull out the decoder PCB.



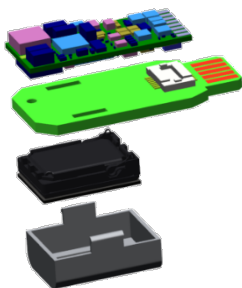
- 3) When the PCB is fully removed from the smokebox the decoder blanking plate can be removed in the usual way.

⚠ Incorrect speaker selection may result in damage to the decoder.

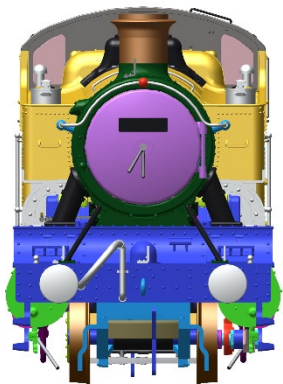
GWR Prairie Class

Speaker Installation: If using a sound decoder an 8-ohm 'Sugar cube' type speaker should be installed (DCC Supplies Product Code: 112965). If an alternative type is fitted, it must produce a total impedance suitable for your decoder's amplifier.

- 1) The speaker enclosure is removed by unclipping (it is held by 2 clips).
- 2) After fitting the sealing gasket (not supplied - DCC supplies product code: 115530), drop the sugar-cube speaker into place with the contacts uppermost and facing the rear of the PCB.



- 3) Clip the speaker enclosure back in place on the PCB
- 4) Slide the PCB into the locomotive, with the speaker on the lower side.
- 5) Finally, refit the smokebox door with the hinge on the left side of the model.



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DCC Factory Fitted models: Are fitted with an imperium DCC decoder (address 3) to control the locomotive. The following function keys on your controller operates special functions.

F1	Firebox flicker On/ Off
----	-------------------------

DCC Sound Factory Fitted models

This model is pre-fitted with a Zimo sound decoder, sugar cube speaker in the smokebox. Authentic sounds from an operating locomotive have been recorded as both manual and automatic sounds. Manual sounds are operated by the following keys on your DCC controller.

i When operating your locomotive on a DC (analogue) layout the decoder will autodetect the power source and produce a synchronised exhaust sound.

Function key summary (Manual sounds):

F1 Sound fade in/out: Useful when loco is going 'on or off scene' or into / out of a tunnel.

F2 Short whistle

F3 Long and short whistle

F4 Coal shovelling: The sound of the firebox door being opened, followed by the firebox flicker effect operating. During this time the sound of shovelling coal will be heard. When F4 is turned off, the shovelling will stop and the firebox door will be heard to close, as the same time as the flicker extinguishes.

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F5 Injector on/off: The injector is used when topping up the water level of the boiler.

F6 Steam ejector on/off: Used for creation of a vacuum and for blastpipe draft creation.

F7 Brake application/release: When first pressed the sound of a brake application will be heard, when pressed again (turned off) the sound of the brakes being released will be heard.

F8 Flange squeal on/off

F9 Light engine mode: with F9 ON lighter chuffs will be heard and the locomotive will accelerate and decelerate more readily. CV390 can be adjusted to change this 'inertia' effect. (Factory value 140).

F10 Safety valve 'blow off'

F11 'More steam' sequence: Injector sound with coal shovelling sound.

F12 Manual draincocks: Additional to the automatic draincocks. Enables the sound of steam 'blast' from the cylinder drains to be triggered.

F13 Buffering up: Sound of buffers clashing.

F14 Coach door slam

F15 Guards whistle

F16 Distant whistle 1

F17 Distant whistle 2

Automatic sounds:

Brake squeal: This sound will be produced when the locomotive speed drops below a pre-set value, only whilst the locomotive is decelerating. The threshold value can be set using CV 287 and can be increased or decreased from the factory value of 20.

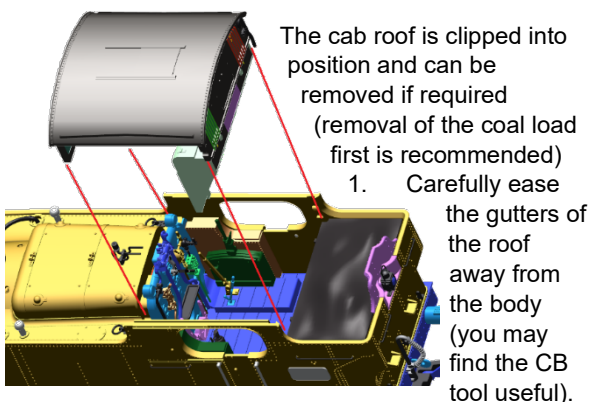
GWR Prairie Class

Chuff intensities:

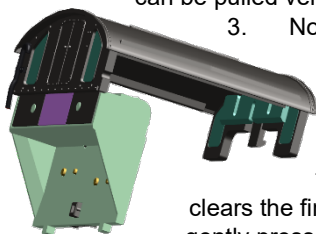
The locomotive can produce 3 intensities of exhaust 'chuff'. Heavy chuffs will be heard whilst accelerating, lighter ones when the target speed is reached. Upon deceleration, no chuffs will be heard.

With F9 ON, even lighter chuffs will be produced, with more 'cut-off'.

Cab roof removal



2. Once a gap is opened, the roof assembly can be pulled vertically from the body.



3. Note that the front and rear bulkheads are attached to the roof.

4. To replace, slot the roof assembly into the body, ensuring it clears the firewall equipment, then gently press into place. The two pegs at the base of the rear bulkhead slot into the footplate (Use of a tool to guide the pegs into position may assist with fitting).

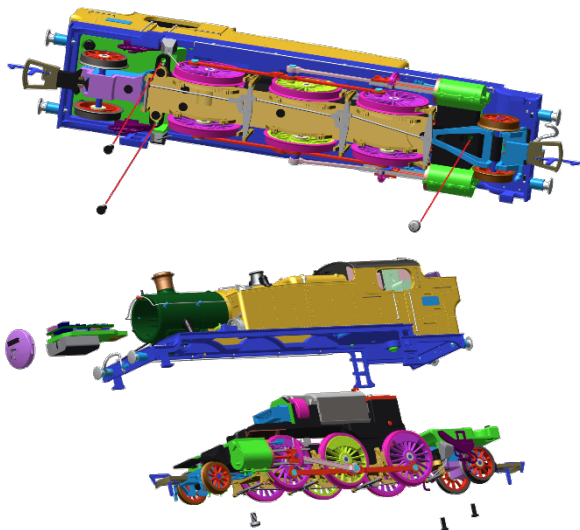
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Body removal

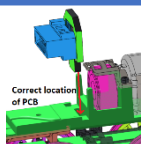
i Body removal is not required for DCC decoder or speaker installation.

⚠ Caution: Dapol do not recommend disassembly, care should be taken to avoid damage to delicate assemblies and detail parts.

1. Remove the smokebox door
2. Remove the Decoder and speaker PCB
3. Remove the three body retaining screws using a 00 or 000 Phillips screwdriver as shown below



i During reassembly check to ensure the decoder PCB socket is correctly located to avoid difficulty whilst re-fitting the body to the chassis.



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Spare parts:




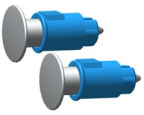




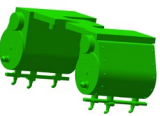
When ordering parts, please ensure you quote Dapol's part number and the model's running number/livery, as parts and colours will vary between versions.

Many parts (especially electrical) are shared with other models in the Dapol Range. Parts which are unique to this model are Highlighted Green, Shared parts are highlighted Orange.




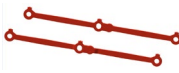
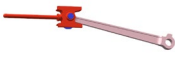
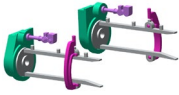
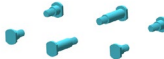


	Part is shared with other models
	Part is unique to Prairie models

Additional parts to those illustrated may be available, please check dapolspares.dccsupplies.com for full list.










GWR Prairie Spare parts

DCC Part Number	Part	Description
	LOCOMOTIVE	
115964		115964
		Whistle (Pair)
115965		Boiler stay (Pair)
115046		Buffers Collett (Pair)
115047		Front buffer beam set
115966		Rear Buffer beam set
115967		Lamp bracket set (loco)
115968		Pony spring
115050		Cylinder & drain cock moulding

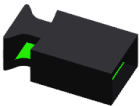

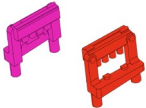



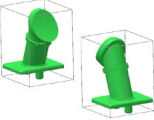


GWR Prairie Spare parts

115969		Handrail and standoff set
115052		Smokebox door and dart
115970		Smokebox door Moulded plate with dart
115056		Connecting rods (Pair)
115057		Piston, crosshead and main rod assembly (left or right)
115058		Slide bar set
115059		Connecting rod bolt set
115971		Front driving wheel set
115972		Centre Driving wheel set

GWR Prairie Spare parts

115973	 A pair of purple wheels with spokes and a central axle, accompanied by two small blue pins.	Rear Driving wheel set
115063	 Seven small, dark brown circular covers arranged in two rows.	Axle stub covers
115064	 A long, thin metal rod with several cross-pieces or notches along its length.	Locomotive brake rod
115065	 A long, yellow metal plate with several raised sections or lugs along its length.	Locomotive "keeper" plate
115066	 A set of six black screws of varying lengths and head shapes.	Body & keeper plate screws (set)
115067	 A single large black screw with a wide, flat head and a threaded shaft.	Body retaining screw
115049	 A blue metal assembly consisting of a frame and a handle, with a small pink adjustment screw.	Front pony frame and adjustment Assembly
115068	 A pair of red wheels with spokes and a central axle, with a blue pin at the axle end.	Pony truck wheels and axle set
115974	 A blue and red metal assembly consisting of a frame and a single red wheel.	Rear bogie assembly

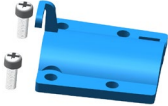
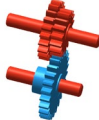

GWR Prairie Spare parts

115975		NEM adapter (Rear bogie)
115070		Cab number plate (Pair)
115976		Lubricators
115977		Water filler (type 1)
115978		Water filler (type 2)
115979		Rear detail set
115980		Steam pipes
115981		Tall safety valves
115982		Short Safety valves

GWR Prairie Spare parts

115983		Coal load
	ELECTRICAL	
115071		Motor, worm & flywheel assy
115072		Motor mounting set
115073		Loco "motherboard PCB" & mounting
115074		OO "Pullout" PCB DC blanking plate
115075		OO "Pullout" PCB
115076		OO "Pullout" PCB speaker housing
115077		Loco pickups (Pair)

GWR Prairie Spare parts

115078	 A blue plastic gearbox cover with two screws and two washers.	Gearbox cover and screws (Set)
115079	 A gear set consisting of two red gears and two blue gears mounted on shafts.	Gear set
DECORATED PARTS		
115984	 A complete locomotive body shell assembly, including the boiler, wheels, and various mechanical components.	Loco Body shell (Complete state part number)

Warranty

Manufacturer's warranty

Description: We want you to be completely satisfied with your purchase and obtain many years of pleasure from its operation. If you experience any problems with your model, we suggest that your first point of contact is your retailer; they will be able to advise on any teething problems and will use their experience to quickly solve many of your questions or concerns.

Your dealer is also the fastest way to exchange a model which is found to be missing components, accessories, or is otherwise defective after purchase. But we recognise that you may require more: If a replacement model is not available you may find a refund disappointing, or you may simply prefer to deal directly with Dapol. For these reasons, we offer a 12-month manufacturer's repair warranty on this product in addition to your statutory rights.



Our Manufacturer's warranty in simple terms: If your model experiences a mechanical or electrical fault within one year of purchase, other than returning to the place of purchase, we offer you have the option of a free repair at our service agents which is (within the UK) also post free.

2nd year service (locomotives only). An option exists to have your locomotive serviced by our authorised agent (a service fee is payable). Simply contact our agent and you will be advised of the current cost and given a freepost address. The model will be serviced and returned with a validated warranty certificate for a second year of no-quibble warranty for your model.



Please note: Year 2 warranties cannot be issued more than 13 months after the original date of purchase.

Warranty



VERY IMPORTANT: Please ensure that your dealer has supplied a proper printed receipt with your purchase. Without this, our service agents are unable to offer warranty service. Repairs will be charged at the prevailing rate. Your statutory rights with the place of purchase are unaffected.

How to claim:

- Locate the proof of purchase (copies acceptable)
- Year 2 claims: Return with validated 2nd year certificate (or service fee if within 13 months of purchase).
- Contact our service agent for a Job ID number.
- Write the Job ID number on the outside of the package, and enclose your name, contact information, proof of purchase and if applicable your year 2 certificate.
- When posting, ensure that you obtain proof of posting and the model is adequately packed. If you require proof of delivery or insurance, you will need to purchase the additional service (at your cost) from your post office.

What happens next? If you have supplied an email address, receipt will be acknowledged, you will be advised when work commences and is completed. They will contact you in case of unforeseen difficulties during repair. Using your email address, you can use the online enquiry system to check the status of your model at any time via the internet.

If you have not supplied an email address, your model will be repaired and returned, you will only be contacted in case of a problem. You may of course contact our agent (quoting the job ID) at any time. What happens when the warranty expires? Our service agent offers a comprehensive repair service at reasonable cost. Alternatively, a comprehensive

Warranty

range of spare parts is available for purchase.

The small print! (Terms and conditions) We intend this 'No Quibble' warranty to be a simple and fair addition to your statutory rights, however, some situations simply cannot be covered as they are outside of our control. We've listed these below.



We're reasonable folks, so if in doubt, please contact either our customer service or service agents for advice on your situation and we'll suggest the best course of action.

Terms and conditions:

1. Only Dapol models packaged with this warranty or marked with a 'W' are covered under this scheme.
2. This manufacturer's warranty is in addition to your existing statutory rights and offers a repair service for your model. Requests for outright refund or replacement should be directed to the place of purchase.
3. In the event the model cannot be repaired, at Dapol's sole option, you may be offered: a new replacement model (subject to availability), a refund voucher (for exchange at the place of purchase) or the return of the model in an unrepaired condition.
4. On issuance of a replacement model or refund voucher the original model and all associated accessories shall become the property of Dapol Ltd.
5. The replacement or repair of a model shall not extend the original warranty period under any circumstance.
6. This warranty covers the model's electronics, chassis and mechanisms for manufacturing defect or premature failure. The following situations are not covered by this warranty:
 - a. Accidental damage
 - b. Missing accessories (i.e. accessory packs) – Please return to your dealer.
 - c. Over or under oiling, incorrect oil type (use a thin synthetic oil i.e. Dapoil, LocoLube™ or similar)
 - d. Fair wear and tear (unless deemed to be premature by Dapol or our service agent)

Warranty

- e. Routine maintenance and/or faults due to presence of foreign bodies i.e. Replacement drive tyres, Dirty wheels, Pickups etc.
 - f. Mishandling: Inclusive of broken wires, dislocated driveshaft's, damaged valve gear. Broken detail parts.
 - g. Mechanical or electrical modification; inclusive of fitting of DCC to a non DCC ready model.
(Reasonable modifications inclusive of: Weathering, super detailing etc. are permitted, however any adverse effects of such modification shall invalidate the warranty.)
 - h. Unauthorised attempts to repair or modify the model.
7. This warranty is not transferable and is valid only for purchases made from authorised Dapol dealers when accompanied by a proof of purchase.
 8. This warranty does not cover: Used models, models purchased from private individuals or auction sites (unless a 'Buy It Now' purchase of a new model from an authorised dealer when supplied with supporting proof of purchase).
 9. Dapol and its agents shall be the sole arbiters as to the warranty status of the model and their decision is final.
 10. Whilst every effort will be made to protect such, Dapol and its agents shall not be liable for damage or alteration to any 'super detailing' or other aftermarket cosmetic, mechanical or electrical enhancements.
 11. Dapol and its agents shall not be held liable for damage caused to inadequately packaged models.
 12. Dapol and its agents shall not be held liable for models lost in the post unless a proof of posting can be supplied.
 13. All repairs will be repaired on a first in-first out basis, within a reasonable period after receipt by our agent. Unless agreed in writing by Dapol or its agent prior to receipt of the model time shall not be of the essence in any contract.
 14. All repairs and/or replacements are subject to availability

Contacts

Contact information:

Dapol Customer service
Telephone: 01691 774455
Email: sales@dapol.co.uk
Website: www.dapol.co.uk

Service and Spares Centre:

DCC Supplies Ltd.
Telephone: 01905 621999
Email: dapol@dccsupplies.com
Website: dapolspares.dccsupplies.com

Notes

Notes

Dapol Limited.

Unit 7 Gledrid Industrial Park, Chirk, Wrexham
LL14 5DG

Telephone: 01691 774455

Website: www.dapol.co.uk

Email: sales@dapol.co.uk

Spares: dapolspares.dccsupplies.com