

ROOTES SERVICE PAINT MANUAL

ROOTES SERVICE DIVISION · COVENTRY · ENGLAND

ROOTES SERVICE PAINT MANUAL

ISSUED BY
ROOTES SERVICE DIVISION · COVENTRY · ENGLAND

**CENTRAL PARTS ORGANISATION
ROOTES MOTORS (PARTS) LTD
COVENTRY ROAD
BIRMINGHAM, ENGLAND**

WORLD EXPORTERS
ROOTES LIMITED · PICCADILLY, LONDON, ENGLAND

NOTE

*The Manufacturers reserve the right to
alter specifications at any time without
notice.*

INDEX TO SECTIONS

INTRODUCTION	PAGE 5
Refinishing and Paint Repair Procedure	SECTION 1
Rootes Refinishing Materials—Technical Data	2
Procedure for Bodywork Repainting	3
Refinishing of Rootes Vehicles in Metallic Colours	4
Paint Faults—Identification and Probable Causes	5
Rectification Procedure 'A' for Remedying Faults Listed in Section 5	6
Paint Faults—Identification and Probable Causes	7
Rectification Procedure 'B' for Remedying Faults Listed in Section 7	8
Paint Faults—Identification and Probable Causes	9
Rectification Procedure 'C' for Remedying Faults Listed in Section 9	10
Appendices	11

ROOTES GENUINE PAINT PRODUCTS

To ensure compatability throughout the refinishing process, it is essential that Rootes Genuine Paint Products are used.

Paint materials are available from Rootes Motors (Parts) Limited, or from any Rootes Main Dealer.

INTRODUCTION

This Paint Manual has been compiled to aid and instruct Rootes Dealers in the operation of a paint repair shop using Rootes Half Hour Enamel process. The information and advice contained herein is intended to supplement the knowledge and skill of the refinisher, and provide guidance on the methods and practices to be adopted. Refinishing practices and materials vary widely, and by the provision of this Manual it is hoped to rationalise these variances to a large degree.

Coincident with the publication of the Rootes Service Paint Manual is the availability of refinishing materials from Rootes Parts Limited. The methods and procedures described in the Manual have their foundation in these materials. No claim against the performance of these materials, or the procedures adopted, will be accepted unless they are in line with these recommendations.

To ensure compatability throughout the refinishing process it is necessary to use Rootes Motors (Parts) Limited products, and no responsibility can be accepted for failure to comply with this procedure.

The Rootes Service Paint Manual is in a loose-leaf form, so that as new materials and techniques arise, additional sections, when published, can be included in the Manual, enabling this to be a permanent reference for the guidance and instruction of paint shop personnel.

REFINISHING AND PAINT REPAIR PROCEDURE

SECTION I

CONTENTS

	Page
Operating conditions	2
Working Area	2
Care and maintenance of equipment	2
Material usage	3

Operating Conditions

The success of all refinishing operations depends largely on the maintenance of clean paint shop conditions, the proper care of equipment and the correct use of materials. The following recommendations are intended to help create a high standard of working conditions and refinishing practice.

Working Area

Ensure there is adequate floor area for the number of vehicles being worked on. Floors and walls must be clean and free of dust. Overhead ledges and beams are potential dust traps and are to be avoided. Where these conditions exist a false ceiling can be used. Do not use discing machines or polishers in vicinity of the spraying or preparation areas.

Walls and ceilings should be painted a clean, bright pastel colour for maximum light reflection. Floors which are inclined to create dust must be treated or painted to seal the surface. Good lighting is essential, and natural daylight should be supplemented with artificial lighting where necessary to minimise shadows and highlights.

In the spraying area adequate ventilation and efficient extraction is necessary, but eliminate draughts. Particular attention must be paid to the cleaning and maintenance of filters in any ventilating system since these can be a source of dirt if not regularly cleaned or changed.

Maintain the shop temperature between 60°F. (16°C.) and 70°F. (21°C.) throughout the year with little variation.

The materials in use are inflammable and fire prevention precautions must be rigidly observed. Dirty rags, empty or open tins, must not be allowed to collect and form a potential source of danger.

Care and Maintenance of Equipment

Proper care and maintenance of all spray equipment will produce a higher and more consistent standard of refinishing.

Compressors must be checked at regular intervals for correct functioning, and change of oil. The air filter must be inspected at least once a month and be cleaned or renewed if necessary. The air receiver and transformers must be drained daily preferably before work commences. Check regularly for leaks in all valves, air lines, hoses and couplings.

Important factors in the care of spray guns are thorough cleaning immediately after use, lubrication of bearings, surfaces and packings at recommended intervals. The spray gun is a precision instrument and proper care must be taken when handling.

Spray guns must not be cleaned by immersion in solvent or thinners as this destroys the lubrication in the packings. It is preferable to leave clean solvent in the cup, attached to the gun, overnight.

Do not use wire or nails to clean out air or fluid holes since this will distort them. Where possible keep separate guns for use with different materials, e.g. primers and fillers, straight colours, and metallics.

Take advantage wherever possible of the equipment manufacturers servicing facilities to ensure that your equipment is fully maintained and up-to-date.

Material Usage (Refer to Fig. 1)

All paint materials not in use must be stored in an approved type of building which is to be maintained at a reasonable temperature.

Before opening tins, always wipe the lid and rim clean to prevent dirt falling into the material. All paints must be thoroughly stirred before use, even though a tin has already been partly used. Ensure that stirrers are clean before use.

When thinning paint always use the correct thinner at the recommended ratio, and check the viscosity before use by means of a flow cup as illustrated.

The instrument illustrated is a B.S.B.4 type flow cup obtainable through Motor Factors. Used in conjunction with a stop watch or clock it enables the sprayer to consistently assess the viscosity of the material he is applying. Use of the cup is quite straightforward, but it is important that the thinned paint is at the same temperature as the shop in which it is to be used. (Note: Shop tempera-

ture should be between 60°F. and 70°F.) The flow cup is to be held or placed in a level position in its stand, a finger placed over the outlet, and the cup filled until paint just flows into the outside well. Simultaneously, start the stop watch and allow the paint to flow into a clean receiver. The time taken for the flow cup to empty indicated by the first break in the flow of paint from the outlet is the viscosity of the material. The cup must be cleaned immediately after use, and care taken that the outlet hole is not damaged or enlarged when being handled.

Thinned materials must always be strained through fresh clean straining material before use.

The use of tack rags is essential in maintaining a dust free surface just prior to painting.

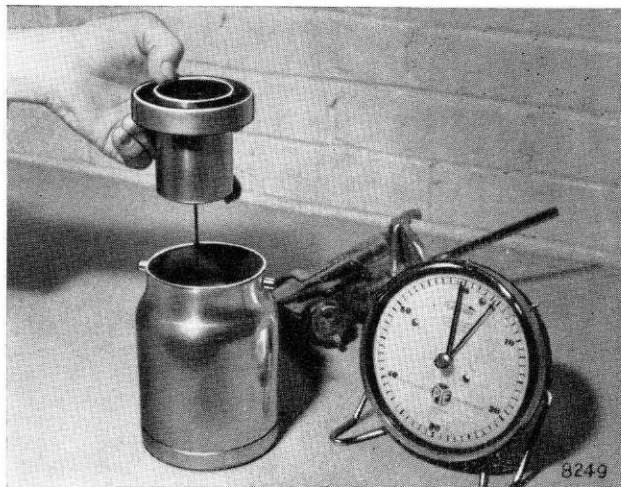


Fig. 1 Flow cup in use

ROOTES REFINISHING MATERIALS TECHNICAL DATA

SECTION 2

CONTENTS

	Page
Rootes Paint Remover	2
Rootes Metal Conditioner and Rust Remover	2
Rootes Cellulose Red Primer... ..	3
Rootes Grey Primer Filler	3
Rootes Cellulose Grey Stopper	4
Rootes Half Hour Enamel	5
Rootes Cellulose Thinner	5
Rootes Half Hour Thinner	6
Rootes Half Hour Enamel Tinters	6
Rootes Smoothing Compound	7

Rootes Paint Remover (Part No. 5240759)

Rootes Paint Remover is non-toxic, non-inflammable and easily removed after use with water. It is safe to handle but eyes must be protected from splashes. After use on wood, remove with white spirit.

Application is to be by brush, applying a good thick layer on one section at a time. Allow the paint remover to penetrate the old paint film for 10 to 15 minutes, and then strip off old paint with a broad stripping knife. If the paintwork is very hard and very old, a second application may be necessary.

Finally wash off with clean warm water, making sure all traces are removed from beadings, mouldings and jointing strips. Dry off with a clean air blow. Finish with a spirit wipe.

It should be noted that if this paint remover is used on glass fibre laminate panels care must be taken not to allow the material to be in contact with the surface for longer than 10 to 15 minutes since the paint remover will have a softening effect on the laminate.

Rootes Paint Remover is available in 1 gallon tins (1.2 U.S. galls.; 4.5 litres).

Rootes Metal Conditioner and Rust Remover (Part No. 5240703)

Rootes Metal Conditioner and Rust Remover is an acidic solution formulated to thoroughly clean ferrous metal and remove all surface rust to ensure perfect adhesion of subsequent paint coats. It will chemically treat the metal surface to prevent further rust spread or creep.

Application is by sponge or brush, and because of the acid nature of the material it is recommended that rubber gloves are worn.

The solution should be allowed to act on the metal surface for 15 to 20 minutes. If rust is deeply embedded, two applications may be necessary. While the solution is on the surface, scuff with emery paper to help loosen scale where necessary.

The neutralisation of acidic derusting solutions is important, and after the metal conditioner has

reacted the prescribed time, the solution must be thoroughly rinsed first with cold water and then with warm water. Pay careful attention to removal of sludge from all beadings and joints.

Any remaining traces of moisture after drying off must be removed by a spirit wipe. A suitable solution for this purpose may be made by mixing equal quantities of methylated spirit and water. It is important that priming of the metal surface be carried out as soon as possible after the metal has been treated.

Rootes Metal Conditioner and Rust Remover is available in non-returnable 1 gallon polythene bottles (1.2 U.S. galls.; 4.5 litres).

Rootes Cellulose Red Primer (Part No. 5240695)

Rootes Cellulose Red Primer is formulated to give maximum adhesion to correctly prepared metal, and it is strongly recommended that a separate primer is used.

Application is by spray, and this primer must be thinned 1 : 1 by volume with Rootes Cellulose Thinner, Part Nos. 5240698 and 5240699, to a viscosity of 26 to 30 seconds using a B.S. B.4. type flow cup at shop temperature between 60°F. (16°C.) and 70°F. (21°C.).

This primer is to be applied in one even wet coat, and must never be applied heavily.

Allow to dry for 30 minutes before continuing with the refinishing process.

Rootes Cellulose Red Primer is available in $\frac{1}{2}$ gallon tins (.6 U.S. galls.; 2.25 litres).

Rootes Grey Primer Filler (Part No. 5240696)

Rootes Grey Primer Filler combines excellent application and filling properties with rapid drying and ease of flatting.

For use as a filler, this material is to be thinned for spray application 1 : 1 by volume with Rootes

Cellulose Thinner, Part Nos. 5240698 and 5240699, to a viscosity of 26 to 30 seconds using a B.S. B.4 type flow cup at a shop temperature between 60°F. (16°C.) and 70°F. (21°C.).

With a normal application of 2 or 3 coats of filler, 5 to 10 minutes drying is to be allowed between coats.

Depending on the number of coats applied and the shop temperature, leave to dry 1 to 2 hours before wet flatting with 400 grade paper. This primer filler is specially formulated to give a smooth flowed out surface and fast easy rubbing. The use of a coarser grade of paper than 400 grade will only result in at best, unnecessary work and at worst, flatting marks which may impair the appearance of the finished panel.

After flatting, rinse away rubbing slush, dry off and remove all traces of moisture with a spirit wipe. Tack off with a tack rag.

Whilst it is strongly recommended that a separate primer be used (Rootes Cellulose Red Primer, Part No. 5240695), Rootes Grey Primer Filler can be used as a primer also if it is considered desirable due to time and economic considerations. For use as a primer it is to be thinned 1 part of Primer Filler to 1½ parts of Rootes Cellulose Thinner, Part Nos. 5240698 and 5240699, to a spraying viscosity of 21 to 24 seconds through a B.S. B.4. type flow cup at a shop temperature between 60°F. (16°C.) and 70°F. (21°C.). Apply a thin wet coat and leave 5 to 10 minutes before applying filler coats. Rootes Grey Primer Filler is obtainable in ½ gallon tins. (6 U.S. galls.; 2.25 litres).

Rootes Cellulose Grey Stopper (Part No. 5240697)

Rootes Cellulose Grey Stopper is intended for use in the half-hour enamel process, and should be used for filling up indentations, file or grinding wheel marks which cannot be filled by cellulose filler. This stopper is supplied ready for use, and is to be applied by knife or spreader over a coat of primer. It must not be applied to bare metal. Deep indentations must not be filled in by one application, but in several layers applied at intervals to avoid pinholing or shrinkage.

Cellulose Grey Stopper can be wet flatted after 1 to 4 hours depending upon the film thickness. After rinsing and drying off the stopped-up, flatted area, any bare metal is to be spot primed before proceeding further.

Rootes Cellulose Grey Stopper is available in 7 lb. tins (3.1 kgs.).

Rootes Half Hour Enamel

A comprehensive range of Rootes colours including metallic finishes is available in Rootes Half Hour Enamel.

This material is intended for spray application and is to be thinned 1 : 1 by volume with Rootes Half Hour Thinner, Part Nos. 5240700 and 5240701, to a viscosity of 26 to 30 seconds using a B.S. B.4. type flow cup at a temperature of 60°F. (16°C.) to 70°F. (21°C.).

The recommended finishing procedure is to apply 2 coats of colour with 15 to 30 minutes drying time between coats. Allow to dry 4 hours and wet flat with 400 paper.

Rinse, dry off thoroughly, spirit wipe and tack off the surface.

Apply final coat of colour.

Allow at least 8 hours to harden before putting into service and do not wax polish for 24 hours.

Rootes Half Hour Metallic Enamels are dealt with separately, refer to Section 4.

Rootes Half Hour Enamels are obtainable in $\frac{1}{2}$ gallon (.6 U.S. galls; 2.25 litres) and 1 pint tins (1.2 U.S. pints; .56 litres).

Rootes Cellulose Thinner and Rootes Half Hour Thinner

These two Rootes Thinners have been formulated expressly for use with Rootes products, and in order to obtain the optimum results with primer, primer filler and enamels, it is essential that these thinners be used as directed.

Rootes Cellulose Thinner :

Formulated for use with Rootes Cellulose Red Primer, Part No. 5240695, and Rootes Grey Primer Filler, Part No. 5240696.

This thinner is available in two pack sizes, 5 gallon drums (6 U.S. galls.; 22·7 litres) under, Part No. 5240698, and in 1 gallon tins (1·2 U.S. galls.; 4·5 litres) under, Part No. 5240699.

Rootes Half Hour Thinner :

Formulated only for use with Rootes Half Hour Enamel.

This thinner is available in two pack sizes, 5 gallon drums, (6 U.S. gall.; 22·7 litres) under, Part No. 5240700, and in 1 gallon tins (1·2 U.S. galls.; 4·5 litres) under, Part No. 5240701.

Rootes Half Hour Enamel Tinters

A wide and comprehensive range of tinters is available for the occasional need for colour adjustment of Rootes Half Hour Enamels.

A list of these tinters can be found in the appropriate Rootes parts lists together with their Part Nos. All Rootes tinters are manufactured to the same quality as Rootes Half Hour Enamel, and all colours are intermixable within the limits imposed for reasons of colour retention and light fastness. These tinters can be used either for colour adjustment or by intermixing to produce a desired colour.

The following colours must NOT be used in the production of pastel shades as they are liable to change somewhat on exposure.

Prussian Blue	Part No. 5240732
Orange	Part No. 5240734
Middle Chrome	Part No. 5240745
Fast Red	Part No. 5240738
Permanent Brown	Part No. 5240756

Rootes Half Hour Enamel Tinters may be thinned for spraying in the same manner as Rootes Half Hour Enamel using Rootes Half Hour Thinners. The following colours should NOT be used as straight refinishing colours, however, for reasons of appearance, opacity or weathering.

Fast Green	Part No. 5240741	Reduced Fast Green	Part No. 5240749
Fast Blue	Part No. 5240740	Reduced Fast Blue	Part No. 5240748

Blue Black	Part No. 5240736	Reduced Blue Black	Part No. 5240750
Burnt Sienna	Part No. 5240755	Reduced Red Oxide	Part No. 5240751
Ochre	Part No. 5240744	Reduced Ochre	Part No. 5240747
Fast Yellow	Part No. 5240743	Fast Blue (Green Tone)	Part No. 5240778

The following hints on colour matching will be found useful in practice.

- (a) Always ensure that tinters are well stirred and that lids are tightly refitted after use.
- (b) Always ensure that mixing containers and stirrers are clean to begin with.
- (c) Colour match in good daylight wherever possible, otherwise use an approved daylight colour matching lamp.
- (d) Always match using the minimum number of tinters. Usually the greater the number of tinters used the dirtier the final colour, and it will be impossible to clean up or brighten the mix.
- (e) Always ensure that the sprayout of the match is quite dry before comparing with the pattern or car being matched. A part of the car colour must be cleaned and polished before comparing the colour.

Rootes Half Hour Enamel Tinters are available in 1 pint tins. (1·2 U.S. pints; ·56 litres).

Rootes Smoothing Compound (Part No. 5240702)

Rootes Smoothing Compound is supplied in paste form, and is intended for the removal of slight surface imperfections and to bring up the lustre of the enamel.

Use as supplied on a clean cloth pad or mop, which should be dampened to ease rubbing. Finish off with a liquid polish if necessary.

Rootes Smoothing Compound is supplied in 6 lb. tins (2·7 kgs.).

PROCEDURE FOR BODYWORK REPAINTING

SECTION 3

CONTENTS

	Page
GENERAL	2
Initial Preparation and Masking up	3
Paint Stripping and Metal Pre-treatment	3
Priming, Stopping and Filling	5
Finishing	6

GENERAL

The procedure which follows using Rootes materials is suitable for respraying either a whole body or any individual panel. To ensure compatability throughout the process it is necessary to use Rootes materials wherever applicable.

Initial Preparation and Masking Up (Refer to Figs. 1, 2 and 3)

Before bringing vehicles into a paint shop or preparation area they are to be reasonably clean, free from heavy dust or dirt, and all loose mud or dirt cleaned from wheels, wheel arches, etc.

Attention must be paid to careful masking, this being properly carried out to edges, with no gaps to allow overspray to infiltrate on to paintwork not under repair or into the interior of the vehicle.

Where masking up for duo-tones or on freshly dried paintwork, ensure that finish is dry and hard before affixing tapes, otherwise printing of the paint film may occur.

Pretaped paper is recommended in the interest of speed and economy in use.

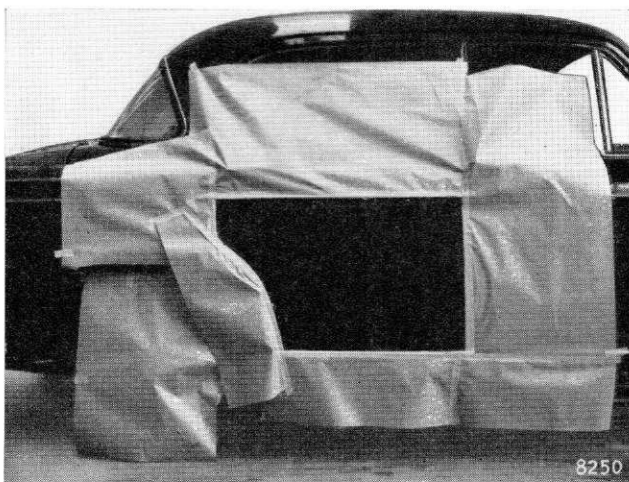


Fig. 1 Edge masking-up

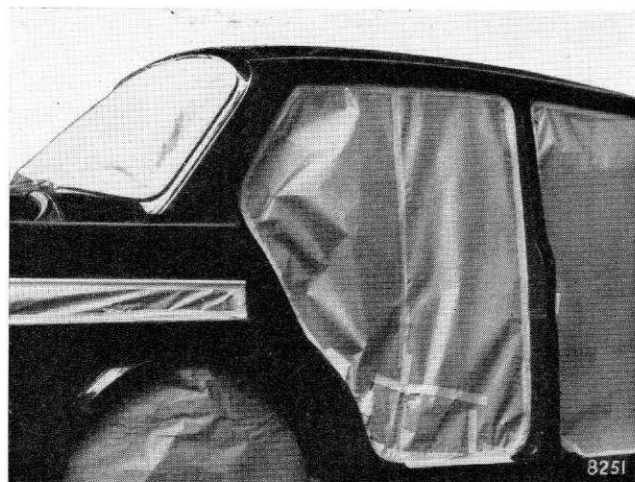


Fig. 2 Interior masking

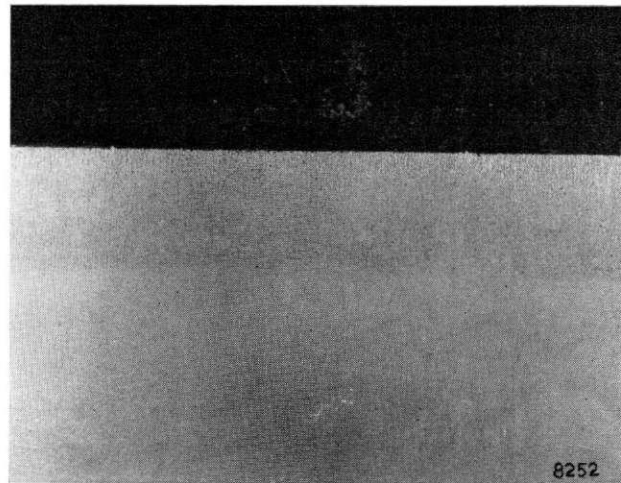


Fig. 3 *Printing of soft paint film by tape*

Paint Stripping and Metal Pretreatment (Refer to Figs. 4, 5 and 6)

Where it is necessary to remove old paint use Rootes Paint Remover, Part No. 5240759, as directed in Section 2.

It is essential after stripping any paint remover, that sludge be washed off thoroughly with warm water, and the area cleaned and dried off. Make sure that all traces are cleaned out from joints and mouldings, and that after washing out, all such crevices are dried thoroughly with compressed air.

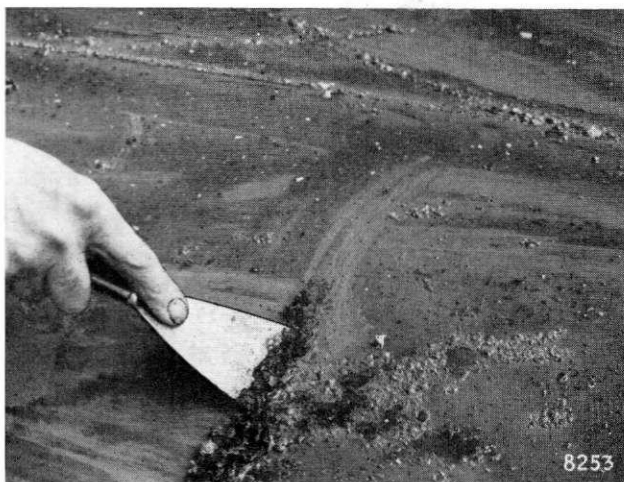


Fig. 4 *Stripping off old paint*

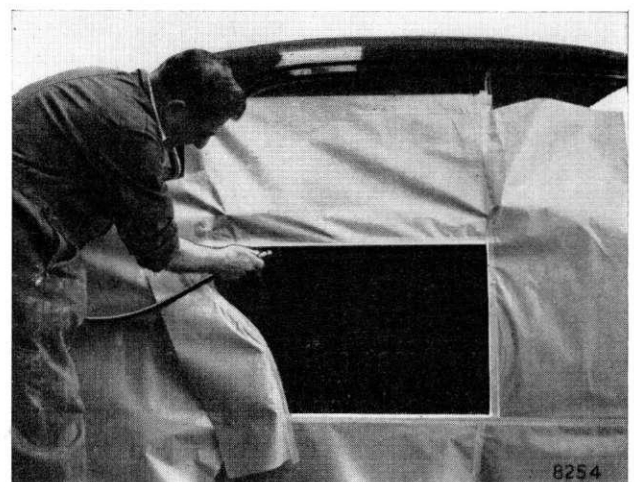


Fig. 5 *Blowing off with air-line*

If repair of the vehicle includes the painting of new parts these must be carefully inspected prior to painting for signs of rust or breakdown of the factory primer during storage. If the factory primer is in a sound condition, firmly adhering to the surface, then after thoroughly degreasing and wet flattening with 280 grade paper, the primer filler stage of this procedure may be followed.

However, should the factory primer not be in a sound condition then it is advisable to strip to bare metal.

Any new parts not primed but covered with a temporary protective coating must have this coating removed thoroughly with an appropriate cleaning solvent before proceeding to pretreat the bare metal.

Pretreatment of metal should be carried out with Rootes Metal Conditioner and Rust Remover, Part No. 5240703, as detailed in Section 2.



Fig. 6 Metal pre-treatment

The adhesion of paint films depend largely on the condition of the metal surface, and a clean, abraded conditioned surface is highly resistant to corrosion and reblistering, and affords maximum key for priming coats.

After pretreatment and neutralisation with water it is most important to remove all traces of moisture. After drying off, the area is to be given a spirit wipe, with a solution made up from equal volumes of methylated spirits and water.

Priming of the metal must be carried out immediately.

Priming, Stopping and Filling (Refer to Figs. 7 and 8)

It is strongly recommended that a separate primer be used, and Rootes Cellulose Red Primer, Part No. 5240695, is designed for purpose of giving maximum adhesion to correctly prepared metal and a high degree of resistance to corrosion and blistering.

This primer is to be thinned as directed in Section 2 with Rootes Cellulose Thinner and sprayed on as one even wet coat. Allow to dry for 30 minutes.

Stopping up with Rootes Cellulose Grey Stopper, Part No. 5240697, should be done over primed metal, never on bare metal, and can be carried out at this stage. Apply stopper where required, wet flat when dry. After rinsing, dry off and spot prime bare metal. Refer to Section 2.

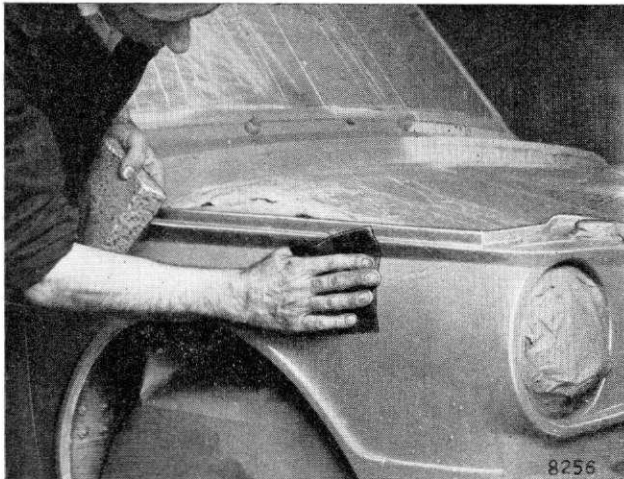


Fig. 7 Wet flatting of primer filler

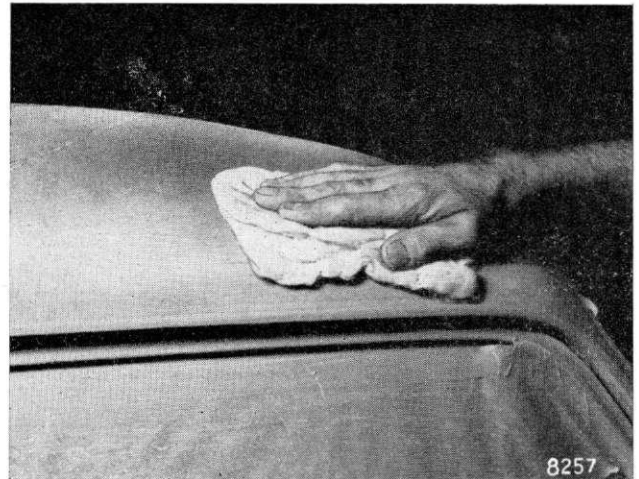


Fig. 8 Use of tack rag

Apply two coats of Rootes Grey Primer Filler, Part No. 5240696, thinned as detailed in Section 2 with Rootes Cellulose Thinner, allowing 5 to 10 minutes between coats. Leave to dry 1 to 2 hours before wet flatting with 400 grade paper.

Rinse off and dry thoroughly. After each flatting operation sufficient time must be allowed for drying off. Furthermore following either wet or dry flatting it is essential that all traces of moisture, abrasive or paint dust be removed with a spirit wipe before applying further paint. After each wipe off operation, use should be made of a tack rag.

Finishing (Refer to Fig. 9)

Apply two coats of the appropriate colour of Rootes Half Hour Enamel thinned 1 : 1 by volume with Rootes Half Hour Thinners, Part Nos. 5240700 and 5240701.

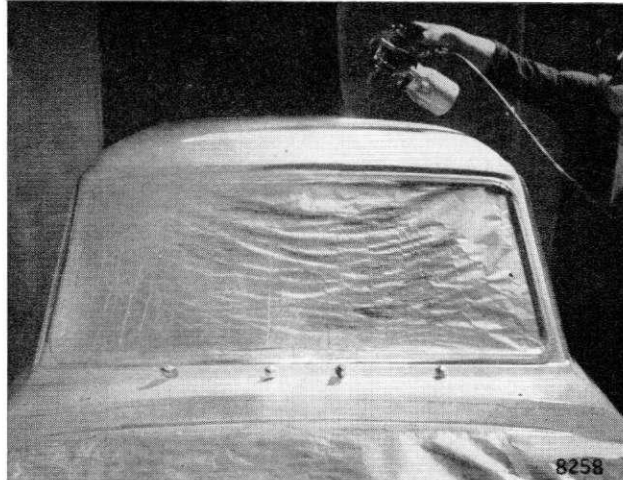


Fig. 9 *Spraying of finishing coats*

The spraying viscosity is to be between 26 and 30 seconds through a B.S.B.4 type Flow Cup at a temperature of 60°F. (16°C.) to 70°F. (21°C.).

Allow 15 to 30 minutes drying time between coats depending on shop temperature. After a 4 hour drying period, wet flat with 400 grade paper. Rinse thoroughly, dry off, spirit wipe and tack off flatted surface. Spraying final coat of colour thinned as for two first coats.

Allow to harden at least 8 hours before putting into service, and do not wax polish for 24 hours.

REFINISHING OF ROOTES VEHICLES IN METALLIC COLOURS

SECTION 4

CONTENTS

	Page
GENERAL	2
Application Technique for Metallic Finishes	2
Colour Matching of Metallic Finishes	3

GENERAL

This section is intended to assist the operator to obtain satisfactory results when repairing cars finished in metallic colours.

A complete range of ready-mixed Rootes Half Hour Metallic Enamels is available, to match the current range of metallic colours used on cars of Rootes manufacture. It is well known that metallic colours require slightly different application and colour matching techniques from those used with straight colours but, provided the recommended procedure is strictly followed, the colours in this range will be found to give a good match to cars brought in for repair.

Application Technique for Metallic Finishes

It is possible to change the colour of a metallic finish by varying the methods of spraying of the final coat; application of a full wet coat tends to bring up the colour of the tinting pigments, whilst dry application brings up the effect of the aluminium, and usually results in a lighter colour.

Rootes Half Hour Metallic Enamels are formulated to give the correct colour when applied in wet coats, and this method of application should always be used initially on a small test panel which is to be checked for colour by holding it on the section under repair, edge to edge with an adjoining clean undamaged section, thus imitating as closely as possible the conditions of edge to edge repair. If the result is too dark, the colour check is to be repeated using drier application in the final coat. The method of application which gives the closest match to the colour of the car must be used throughout the tinting operation and for the spraying of the car itself.

To ensure good appearance and a high gloss with the dry application technique, a wet coating should first be applied and then allowed to flash for one minute, before building it up by dry application, to give the required colour.

Normal thinning of the finish is in the ratio of one part of paint to approximately one part of Rootes Half Hour Thinners, Part Nos. 5240700 and 5240701, to a viscosity of 25-30 seconds in a B.S.B.4 flow cup at a temperature of 60°F. (16°C.) to 70°F. (21°C.) but to give the best control over colour development in the sprayed film, it is often preferable to add a little more thinner to bring the viscosity down to 21-23 seconds. Control of spraying cannot be maintained without the use of a viscosity cup and inconsistent results may be obtained if thinning is carried out by volume mix only. Refer to Section 1.

Aluminium pigments settle more readily than the other tinting pigments and thorough incorporation of the aluminium by stirring is essential before thinning to spraying viscosity. Separation of the aluminium tinter is even more likely to occur in the thinned state and stirring is essential before every spraying operation. If consistently darker results are being obtained on repaired areas it is advisable to check stirring techniques. Inefficient stirring will be indicated by the high concentration of aluminium in the paint remaining in the bottom of the container after decanting. The addition of a clean small steel ball to the spray container will help provide agitation during spraying.

Colour Matching of Metallic Finishes

In the few cases where altering the spraying technique still does not produce a good match to the parent colours, small additions of tinters will be necessary.

The selection of Rootes Half Hour Enamel Tinters listed in the Rootes Parts Lists and Service Paint Manual Bulletin Appendices, Section 11, are recommended for use in colour matching metallic finishes. Also listed in this Section are current Rootes metallic colours with each colour having a list of tinters which past experience has shown to be most useful in producing the necessary colour adjustment.

Always remember that small additions of tinters to metallics can make a large difference to the colour, so care should be taken with addition.

The employment of the reduced tinters where available gives the colour matcher greater latitude for adjustment.

When tinting a metallic finish it is necessary to check the effect when viewed both "full face" and "from the side", since due to aluminium pigment content the colour will vary with the angle of viewing. For this reason, the effect of tinters on the colour, viewed from both these positions, must be considered before additions are made.

The following hints on the effects of different tinters will prove helpful.

- (1) White, Part No. 5240733, lightens the side tone without noticeably affecting the full face colour.
- (2) Reduced Ochre, Part No. 5240747, Reduced Red Oxide, Part No. 5240751, Scarlet Oxide, Part No. 5240730, tinters colour the side tone rather than the face.

Remember that these tinters introduce a 'milky' tone to the side colour effect.

- (3) The following tinters affect both face and side tones:—

Deep Purple Blue	Part No. 5240737
Fast Red	Part No. 5240738
Fast Maroon	Part No. 5240739
Fast Violet	Part No. 5240742
Fast Yellow	Part No. 5240743
Fast Green Gold	Part No. 5240746
Permanent Brown	Part No. 5240756
Burnt Sienna	Part No. 5240755
Reduced Fast Blue	Part No. 5240748
Reduced Fast Green	Part No. 5240749
Reduced Blue Black	Part No. 5240750
Fast Blue (Green tone)	Part No. 5240778

- (4) Extra Fine Silver, Part No. 5240752, Fine Silver, Part No. 5240753, Bright Silver, Part No. 5240754, tinters lighten and brighten the face colour without appreciably affecting the side tone.

Again, remember that except where identified as reduced, all tinters are full strength, and extra care is necessary when adding them to avoid overshooting the colour effect required.

In order to obtain maximum light fastness only the recommended tinters are to be used.

PAINT FAULTS—IDENTIFICATION AND PROBABLE CAUSES

SECTION 5

CONTENTS

	Page
GENERAL	2
Blistering	2
Corrosion or Rusting	3
Lack of Adhesion	4
Crasing or Checking	5
Lifting of Paint Films	6

GENERAL

This section is written and illustrated to enable paintshop personnel to identify and rectify, in the most economical manner, various conditions which could arise either in service, in refinishing, or as a result of abnormal operating conditions.

BLISTERING (Refer to Figs. 1, 2, 3 and 4).

All paint films are permeable to some degree by moisture which may eventually lead to the formation of blisters. Metal pretreatment and priming processes as in production allied to the application of high durability finishes, used in present day car production, practically eliminate the possibility of blistering but in isolated instances the following blistering conditions may be encountered.

Identification

- (i) Contamination blistering—"snail trails", finger print blisters, or ring blisters are all instances of this form of blistering.
- (ii) General blistering and blistering due to corrosion.

Cause

- (i) Contamination of the metal or paint surface prior to painting is the usual source of this type of blister. Ring and "snail trail" blister formations can be traced back to minute amounts of solid deposits on the prepainted surface, left after the evaporation of "hard" water. Moisture penetration of the paint film is greater at these points, with a lessening of adhesion followed by the eruption of blisters. Contamination from perspiration is the cause of fingerprint blisters, and it is essential that clean surfaces prior to painting are not handled excessively or unnecessarily.
- (ii) General blistering can be caused by a number of factors, faulty preparation, exposure of the paint film to constant or repeated excessive humidity, or faulty material. Blisters originating at the metal surface inevitably lead to corrosion and rust creep, and are due to either metal contamination, incorrect preparation of the metal or inadequate paint coverage.

Remedy

Adopt Rectification procedure 'A' outlined in Section 6

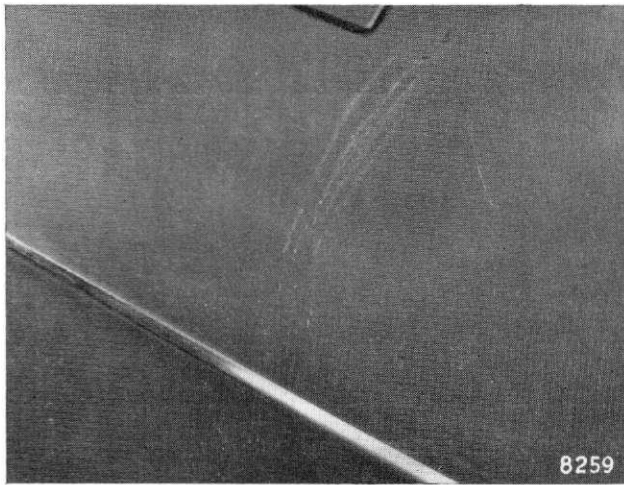


Fig. 1 "Snail trail" blistering

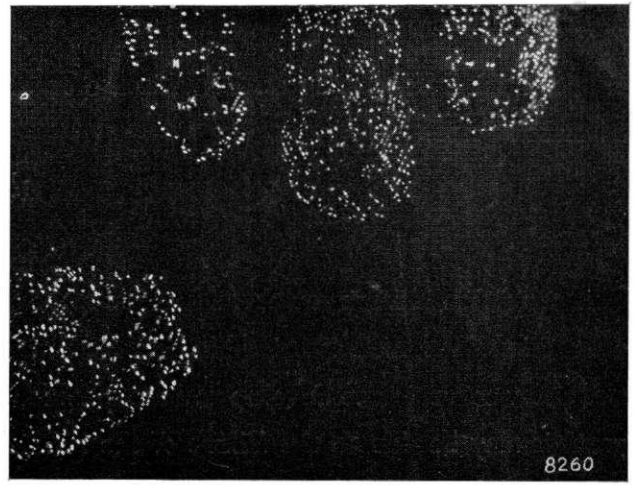


Fig. 2 Finger print blisters

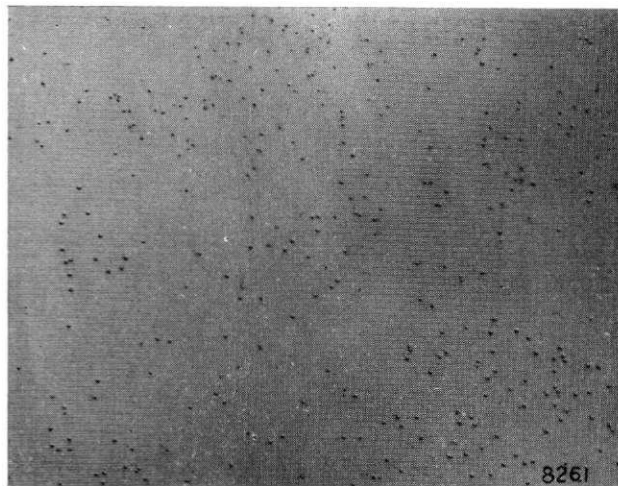


Fig. 3 General blistering

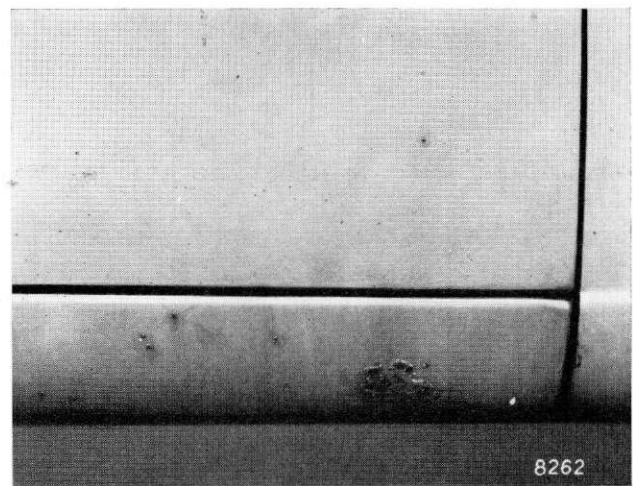


Fig. 4 Blistering due to corrosion

CORROSION OR RUSTING

This is generally confined to the lower parts of vehicles, and particularly along edges and body joints subjected to the maximum effect of road and weather conditions, e.g., road grit and salt, water and slush or snow. This condition will only be in evidence on older vehicles or where the vehicle finish has been allowed to deteriorate due to lack of regular attention.

Identification

Erupted paint film with rust formation, often accompanied by lack of adhesion and blistering in an advanced state.

Cause

This condition is frequently an advanced stage of blistering unless it is due to complete lack of metal protection. Where blistering has become dense and widespread, the paint film may well break down and allow corrosion to develop and creep under the paint film. If in evidence on previously refinished parts it may be due to the failure of the refinisher to completely remove all previous corrosion or rust deposits, lack of correct or improper metal pretreatment or low film thickness of paint. Replacement parts in factory primer or protective coatings should be checked for isolated corrosion spots caused by transit conditions and be correctly treated before refinishing.

Remedy

Adopt Rectification Procedure 'A' outlined in Section 6.

LACK OF ADHESION (Refer to Fig. 5)

Lack of adhesion may occur between paint films, often referred to as "poor intercoat adhesion", or between the metal surface and subsequent coats of paint.

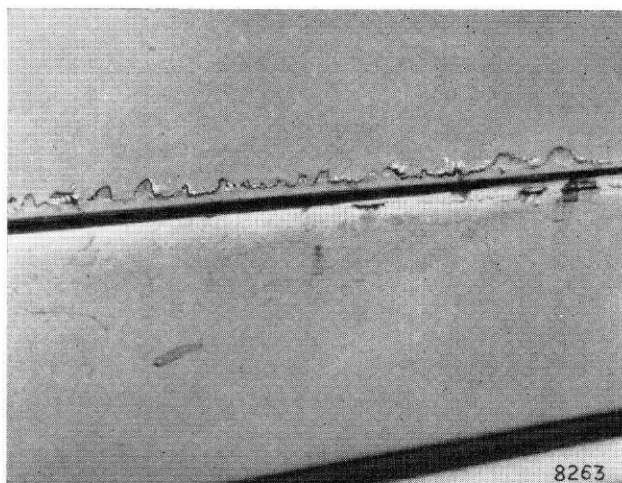


Fig. 5 Lack of adhesion

Identification

Paint film peeling or cracking away from edges or mouldings.

Cause

Where the lack of adhesion is at the metal surface this is usually due to the incorrect preparation of the metal, poor degreasing or failing to use a metal pretreatment.

Where the failure is between coats, surface contamination or improper flattening is the usual cause. The use of cheap thinners or incorrectly balanced thinners can also be responsible for poor intercoat adhesion.

Remedy

Adopt Rectification Procedure 'A' outlined in Section 6.

CRAZING OR CHECKING (Refer to Fig. 6)

Crazing or checking will only normally occur as a result of excessive weathering or in aged paint finishes.

Identification

This condition may easily be recognised by the appearance of fine lines and cracks in the film, and is often accompanied by a loss of gloss and possibly a chalky appearance.

Cause

The surface of the paint film has been eroded away, and consequent embrittlement of the film with constant expansion and contraction causes crazing or checking to occur. If this condition is experienced prematurely on a refinished part then possible causes are excessively heavy coats, insufficient drying time allowed between coats, incorrect mixing of materials, or possible incompatibility of finishes (e.g. use of wrong thinners, tinters, etc.). When refinishing aged paint film it is advisable to check carefully for this defect as refinishing over it may cause premature failure of the refinished part.

Remedy

Adopt Rectification Procedure 'A' outlined in Section 6.



Fig. 6 Crazing or checking

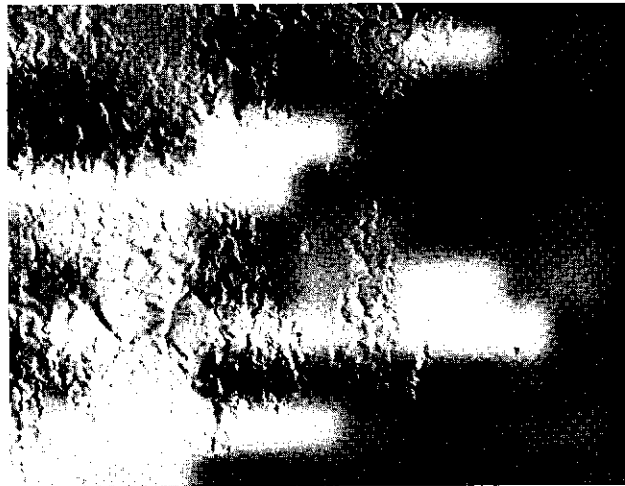


Fig. 7 Lifting of paint film

LIFTING OF PAINT FILMS (Refer to Fig. 7)

When refinishing vehicles which have been in service some considerable time and have previously been refinished or touched in by the owner, it is possible to encounter the problem of lifting of the existing paint finish by the application of Half Hour Enamel. (If it is suspected that the existing finish will create a "lifting" problem it is advisable to test spray a small area to determine whether or not this condition will occur.)

Identification

The affected area will be raised and swollen somewhat similar in appearance to the effect of paint remover. When dry the area may tend to crack and peel.

The usual reason for this problem is the previous use of a paint finish that is subject to attack by cellulose solvent, e.g., a coach synthetic enamel or oxidisable air drying finish. This defect may also arise when recoating a weathered or perished film that should have been removed.

Remedy

Adopt Rectification Procedure 'A' outlined in Section 6.

RECTIFICATION PROCEDURE 'A'

SECTION 6

CONTENTS

	Pages
GENERAL	2
Remedying faults listed in Section 5	2 & 3

GENERAL

The following procedure is recommended for the rectification of:

- | | |
|--|---------------------------------------|
| (a) Contamination blistering and general blistering. | } Refer to Section 5 for descriptions |
| (b) Areas affected by corrosion or rust. | |
| (c) Areas showing lack of adhesion to metal. | |
| (d) Crazed or perished weathered finishes. | |
| (e) Paint films attacked or lifted by refinishing materials. | |

Procedure

1. Strip the affected area or panel completely back to bare metal using Rootes Paint Remover, Part No. 5240759, as directed. (Refer to Section 2).
2. Ensure that the surface is washed thoroughly with clean water to remove all traces of Paint Remover. Abrade the surface with 280 grade paper.
3. Treat all bare metal with Rootes Metal Conditioner and Rust Remover, Part No. 5240703, according to directions. (Refer to Section 2).
4. Ensure that the surface is rinsed and dried off, especially in crevices, mouldings, etc. It is recommended that priming of the metal surface is carried out immediately.
5. Spray one thin wet coat of Rootes Cellulose Red Primer, Part No. 5240695, thinned 1 : 1 by volume with Rootes Cellulose Thinner, Part Nos. 5240698 and 5240699. Allow half an hour to dry. (Refer to Section 2).
6. Apply Rootes Cellulose Grey Stopper, Part No. 5240697, locally if required. When dry, wet flat stopped up areas, rinse off, dry and spot prime bare metal areas. (Refer to Section 2).
7. Spray two coats of Rootes Grey Primer Filler, Part No. 5240696, allowing 5 to 10 minutes between coats. Thin Rootes Grey Primer Filler, Part No. 5240696, 1 : 1 by volume with Rootes Cellulose Thinners, Part Nos. 5240698 and 5240699.

Allow to dry 1 to 2 hours, then wet flat with 400 grade paper. Rinse off and dry thoroughly. (Refer to Section 2).

8. Spray two coats of colour with 15 to 30 minutes between coats. Using Rootes Half Hour Enamel of the appropriate colour thinned 1 : 1 by volume with Rootes Half Hour Thinner, Part No. 5240700 and 5240701. (Refer to Section 2).
9. Allow to dry 4 hours and wet flat with 400 grade paper. Spray final coat of colour.
10. Allow at least 8 hours to harden before putting into service, and do not wax polish for 24 hours.

Important Note

Indifferent or incorrect treatment of blistered and rusted areas or areas exhibiting lack of adhesion may well result in a reappearance of the original fault. It should be noted that only efficient and thorough metal pretreatment of the affected area will ensure that the problem does not re-occur.

PAINT FAULTS—IDENTIFICATION AND PROBABLE CAUSES

SECTION 7

CONTENTS

	Page
Cissing and Cratering ...	2
Loss of Gloss ...	3
Orange Peel ...	4
Runs and Sags ...	5
Pinholing ...	5

CISSING AND CRATERING (Refer to Fig. 1.)

The film defects known as "cissing" and "cratering" will only be found as a result of refinishing application.

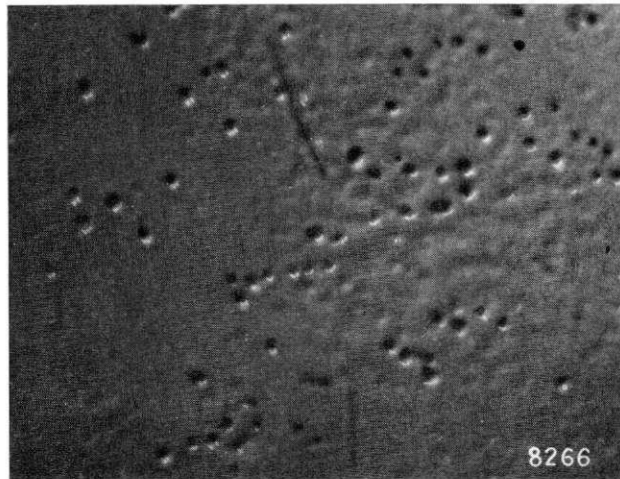


Fig. 1 *Cissing and Cratering*

Identification

The appearance of this defect can be both local or widespread, and takes the form of small craters or indentations in the paint film, and frequently the underlying surface is visible through the centre of the crater.

Cause

Cissing is normally due to surface contamination by silicone containing materials, waxes or greases, causing the refinishing material to be repelled in application from the affected areas. Craters can also be caused in this way, or by failure to completely eliminate moisture from the surface by correct blowing off with an air hose particularly in crevices or behind mouldings. Care should also be taken to ensure that air lines do not contain condensed moisture, by frequent draining of the air compressor and regulator (Refer to Section 1).

Remedy

Adopt Rectification Procedure 'B' outlined in Section 8.

LOSS OF GLOSS (Refer to Fig. 2).

Severe loss of gloss may occur either as a result of weathering of the paint film, or as a defect in the application of the finish.

All original equipment finishes are exhaustively tested to ensure a very high level of durability under varying climatic conditions providing regular care and attention is paid to cleaning and maintaining the paint film.

Identification

Dull appearance, which may be accompanied by a powdery surface (chalking) in the case of very old, badly weathered finishes.

Cause

Loss of gloss by weathering should only be experienced where insufficient attention has been paid to regular maintenance of the finish. Where this condition occurs in the refinishing enamel it can often be traced to faulty application. Dry spray, inadequate number of coats, heavy application of filler, incorrect thinning or the use of incorrect thinners, faulty equipment can all cause or contribute to this defect.

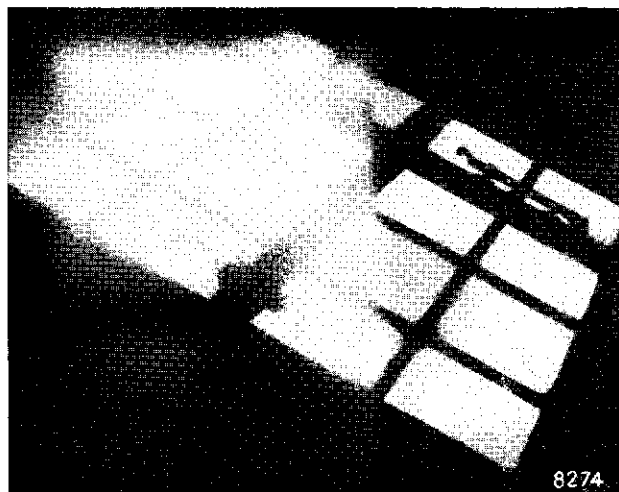


Fig. 2 *Loss of gloss compared in reflection of panel*

Remedy

Adopt Rectification Procedure 'A' outlined in Section 6 if loss of gloss is due to excessive weathering of paint film and if finish is obviously perished or in an advanced stage of breakdown.

If severe loss of gloss occurs and is due to application techniques adopt Rectification Procedure 'B', outlined in Section 6.

ORANGE PEEL (Refer to Fig. 3).

Some degree of "orange peel" in the appearance of a finish is acceptable and for several reasons desirable, but the existence of excessive "orange peel" in refinishing work is primarily due to bad application technique.

Identification

As the name implies, in this defect the paint film resembles the skin of an orange, the surface being uniformly indented, and where excessive it can produce slightly lower gloss and a somewhat shrivelled appearance.

Cause

Invariably the cause is faulty application technique, being either the use of incorrect thinner, too high an application viscosity, or incorrect air pressure.

Too high a paint shop temperature can also produce this defect because of too rapid drying of the finish not allowing correct flow of the material.

Remedy

Adopt Rectification Procedure 'B' outlined in Section 8.

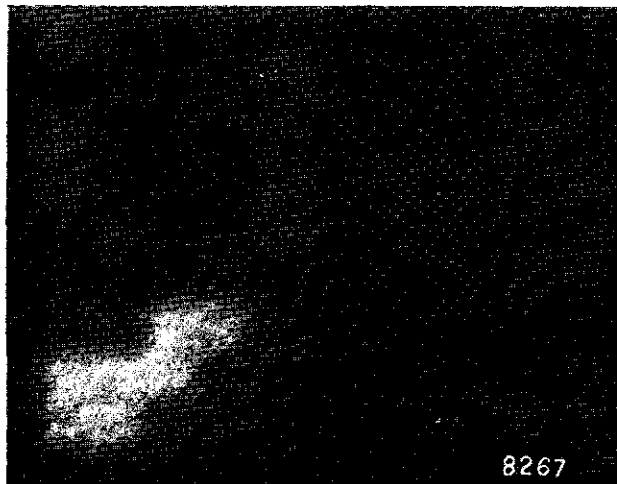


Fig. 3 Excessive orange peel

RUNS AND SAGS (Refer to Fig. 4).**Identification**

Curtaining of the paint film.

Cause

Invariably poor application technique, failure to observe the need for correct viscosity adjustment or use of wrong thinner.

Uneven spray application will produce runs and sags, as will the use of too low air pressure which means a lack of atomisation.

Overthinning of the material, not allowing sufficient time between coats will also produce this effect.

Remedy

Adopt Rectification Procedure 'B' outlined in Section 8.

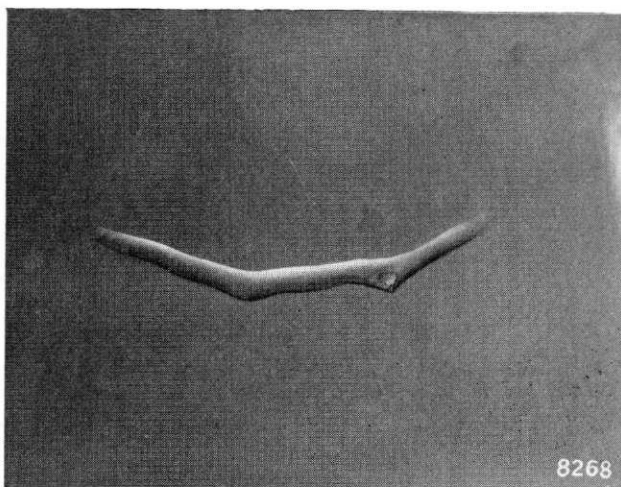


Fig. 4 *Runs and sags*

PINHOLING (Refer to Fig. 5).**Identification**

This defect has the appearance of massed tiny holes usually in an area where excessive material has been applied.

Cause

This appearance is caused by the entrapment of solvent or air in a heavy coat of material. After surface drying of the paint the solvent or air is forced out from below leaving a pin hole as a result. This condition is most likely to occur in an overheated shop or where infra-red lamps have been used on the refinished area to speed up the drying time.

Pinholing can result when refinishing areas which have been stopped up either with cellulose stopper or catalysed deep fillers. One or two thick films of stopper should not be applied to fill deep indentations, but several thin layers with the proper drying time between applications.

To avoid pinholing with the use of catalysed deep fillers only the correct amount of hardener or catalyst should be used, and this should not be excessively or vigorously stirred in otherwise a great deal of air is incorporated which will eventually cause pinholes.

Remedy

Adopt Rectification Procedure 'B' outlined in Section 8.

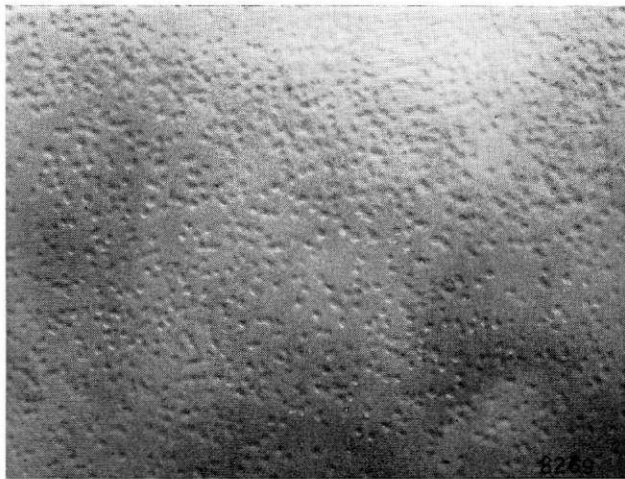


Fig. 5 *Pinholing*

RECTIFICATION PROCEDURE ‘B’

SECTION 8

CONTENTS

	Page
GENERAL	2
Remedying faults listed in Section 7	2

GENERAL

The following procedure is recommended for the rectification of:—

- | | |
|--|--------------------------------------|
| (a) Cissing and cratering. | } Refer to Section 7 for description |
| (b) Severe loss of gloss due to application technique. | |
| (c) Excessive orange peel. | |
| (d) Runs and sags. | |
| (e) Pinholing. | |

Procedure

1. Completely wet flat the affected panel using 320 grade paper. Where the defect is orange peel, pinholing or runs and sags, it will be necessary to ensure that flattening is carried out to a point where the defect is completely eliminated. Do not flat only to a point where just the high spots of the defect are removed. If necessary start with a 280 grade paper and finish with a 320 grade paper to ensure a good surface.

Where cissing or cratering is a result of the presence of silicones it is recommended that frequent changes of flattening paper and water be made throughout the flattening operation. This will ensure greater cleanliness of the surface and prevent the contaminant merely being transferred from the vehicle surface to the water, and back again to the freshly flattened surface. The application of 1 or 2 coats of Rootes Grey Primer Filler may be necessary to eliminate this defect. Rinse off all rubbing slush, dry off thoroughly. Follow with a spirit wipe and tack off.

2. Providing the colour coats have not been rubbed through to bare metal, apply 1 or 2 coats as necessary of the appropriate colour of Rootes Half Hour Enamel thinned 1 : 1 by volume with Rootes Half Hour Thinner, Part No. 5240700 and 5240701. If a further coat is considered necessary, allow to dry 4 hours and wet flat with 400 paper. Spray final coat of colour.
3. Allow at least 8 hours to harden before putting into service, and do not wax polish for 24 hours.

**PAINT FAULTS—IDENTIFICATION
AND PROBABLE CAUSES**

SECTION 9

CONTENTS

	Page
Industrial Fallout and Film Contamination	2
Water Spotting	3

INDUSTRIAL FALL-OUT AND FILM CONTAMINATION (Refer to Fig. 1.)**Identification**

The form taken by industrial fall-out or film contamination varies according to its source.

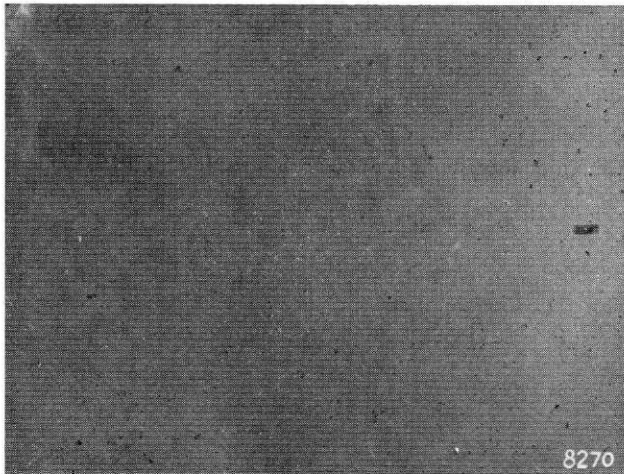


Fig. 1 *Dirt contamination*

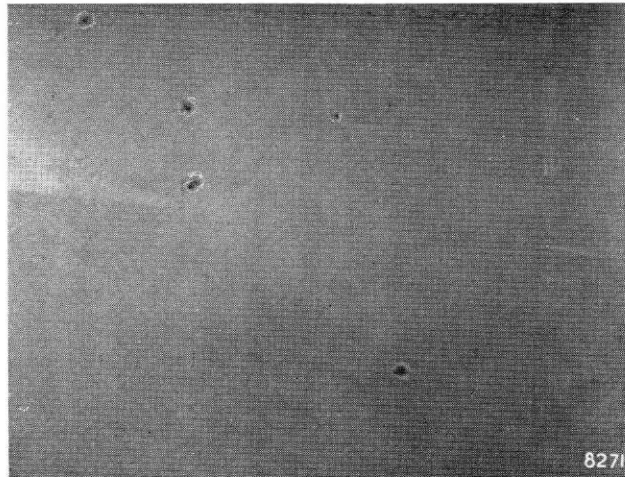


Fig. 2 *Industrial fall-out*

The first three illustrations show dirt contamination and industrial fall-out (Refer to Fig. 2) where the vehicle has been in close proximity to a highly polluted industrial atmosphere such as train sidings or steel works.

The ever present menace of bird droppings (Refer to Fig. 3) which if left for any length of time can at certain seasons cause definite chemical action on a paint finish.

Other common forms of contamination are diesel fumes identified as a film darkening in patches, resinous tree exudations and various organic deposits.

Cause

This is invariably air-borne pollution followed by prolonged contact of contaminants, and it is recommended that vehicle owners be advised of the benefits of regular washing and cleaning.

This is essential where vehicles are used in highly polluted industrial atmospheres, salty atmospheres around the coast, and in districts where a great deal of salt and grit are placed on the roads in winter. In the latter areas, underbody washing at intervals is to be recommended.

Remedy

Adopt Rectification Procedure 'C' outlined in Section 10. If fallout is deeply embedded and not rectified by procedure (C) adopt Rectification Procedure 'B' outlined in Section 8.

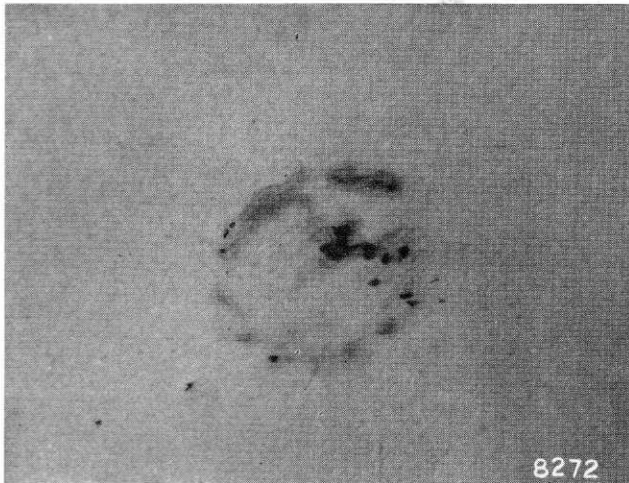


Fig. 3 Fouling by birds

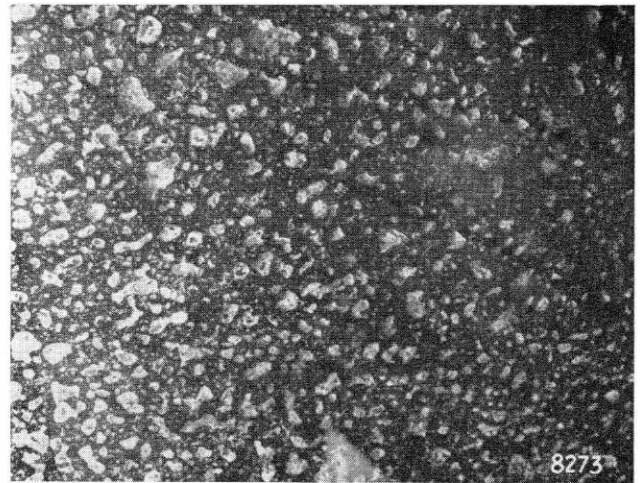


Fig. 4 Water spotting

WATER SPOTTING (Refer to Fig. 4)

Identification

Water spotting of a paint film can be identified as small circles on the finish, often slightly whitish in appearance due to the absorption of moisture, and frequently accompanied by slight dulling of the gloss. Most likely to be found only on the horizontal surfaces of a vehicle.

Cause

This condition may be found on refinished parts which have been allowed to get wet before the paint film is properly hard and dry. Alternatively the spotting may be due to local contamination where the newly refinished vehicle has been washed or rained upon and water allowed to dry off in strong sunlight.

Remedy

Adopt Rectification Procedure 'C' outlined in Section 10.

RECTIFICATION PROCEDURE 'C'

SECTION 10

CONTENTS

	Page
GENERAL	2
Remedying faults listed in Section 9	2

GENERAL

This procedure is recommended for the rectification of:—

- (a) Film defects due to industrial fall-out and contamination and surface dirt inclusion.
- (b) Water Spotting.

Procedure

1. Notwithstanding the nature of the contamination the vehicle should be thoroughly washed with a weak liquid detergent solution. The use of powdered detergents is inadvisable since these can leave powdery deposits.

This simple treatment may well effect considerable improvements in many cases.

2. Water Spotting, surface dirt inclusion and certain types of industrial contamination can be removed by polishing the affected area with a mildly abrasive liquid polish obtained from Rootes Motors (Parts) Ltd., under, Part No. 5240133. If this is not sufficiently effective, the area should be compounded with Rootes Smoothing Compound, Part No. 5240702, and then polished.
3. Where the industrial fall-out or contamination is heavy, and has become embedded in the film through chemical action (e.g. bird droppings) then it may be necessary to adopt Rectification Procedure 'B' outlined in Section 8.

APPENDICES

SECTION 11

Model:

Subject: REFINISHING IN METALLIC COLOURS

The Rootes Half-Hour Metallic Enamels are available ready mixed to match the metallic colours in current use on Rootes Group Cars and are listed below. The Part Numbers refer to 1 pint and 4 pint quantities respectively. Tinters are in 1 pint tins.

On certain occasions a sprayed test panel may indicate that some tinting is necessary. Under each of the colours listed below is a short list of tinters which experience has shown will be most useful in producing the necessary colour adjustment.

With earlier metallic colours not mentioned below, it is important to use tinters compatible with the ready-mixed colours being employed; the technique for I.C.I. 'Belco' 300 Metallichrome was described in Service Bulletin 0.19 (Export 0.20).

Steel Grey Metallic (Code No. 56) Part Nos. 5115144 and 5115145.

The following tinters may be required:-

Part No.5240750 Reduced Blue Black-to colour both side and face tones
Part No.5240751 Reduced Red Oxide-to lighten and redden the side tone
Part No.5240747 Reduced Ochre - to lighten and colour the side tone.

Grey Metallic (Code No.10) Part Nos. 5115146 and 5115147.

The following tinters may be required:-

Part No.5240753 Fine Silver - to lighten face tone.
Part No.5240733 White - to lighten side tone.
Part No.5240751 Reduced Red Oxide - to redden side tone.

Bronze Metallic (Code No.62) Parts Nos. 5115148 and 5115149.

The following tinters may be required:-

Part No.5240753 Fine Silver-to lighten and brighten the face tone.
Part No.5240756 Permanent Brown-to colour both face and side tone.
Part No.5240730 Scarlet Oxide-to redden and lighten the side tone.

Quartz Blue Metallic (Code No.61) Part Nos.5115150 and 5115151.

The following tinters may be required:-

Part No.5240748 Reduced Fast Blue - To colour both side and face tones.
This is a green toned blue.
Part No.5240737 Deep Purple Blue-a red toned blue to colour both side
and face tone. Use sparingly.
Part No.5240739 Fast Maroon-to redden both side and face tones.
Use sparingly.

Continued.

Appendix 1, Page 2.

Solent Blue Metallic (Code No.63) Part Nos. 5115152 and 5115153.

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten the face tone.
- Part No. 5240748 Reduced Fast Blue - colours both face and side tones.
- Part No. 5240730 Scarlet Oxide - colours and lightens side tone.
- Part No. 5240747 Reduced Ochre - colours and lightens side tone.

Autumn Gold Metallic (Code No.68) Part Nos. 5115154 and 5115155.

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten the face tone.
- Part No. 5240747 Reduced Ochre - to colour side tone.
- Part No. 5240751 Reduced Red Oxide - to colour side tone.
- Part No. 5240755 Burnt Sienna - to colour both face and side tones.

Light Green Metallic (Code No.67) Part Nos. 5115160 and 5115161.

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240746 Fast Green Gold - to colour both face and side tones.
- Part No. 5240748 Reduced Fast Blue - to colour both face and side tones.

Sapphire Blue Metallic (Code No.83) Part Nos. 5115178 and 5115179.

The following tinters may be required:-

- Part No. 5240751 Reduced Red Oxide - to colour side tone.
- Part No. 5240737 Deep Purple Blue - colours both face and side tones.
Use sparingly, is a red toned blue.
- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240733 White - to lighten side tone.

Silver Grey Metallic (Code No.82) Part Nos. 5115180 and 5115181.

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240748 Reduced Fast Blue - to colour both face and side tones.
Use sparingly.
- Part No. 5240747 Reduced Ochre - to colour and lighten side tone.
- Part No. 5240750 Reduced Blue Black - to colour both side and face tones.

Nevada Grey Metallic. Part Nos. 5115184 and 5115185.

The following tinters may be required:-

- Part No. 5240733 White - to lighten the side tone.
- Part No. 5240755 Burnt Sienna - to colour both side and face tones.

Continued...

The following tinters may be required:-

Blue Use sparingly.

Part No. 5240747 Reduced Ochre - to colour and lighten the side tone.

The following tinters may be required:-

Part No. 5240750 Reduced Blue Black-to colour both face and side tones.

The following tinters may be required:-

Part No. 5240750 Reduced Blue Black-to colour both face and side tone.

The following tinters may be required:-

Part No.5240737 Deep Purple Blue-to colour both face and side tones.
Use sparingly.

Royal Blue Metallic (Code No.97) Part Nos. 5115208 and 5115209.

The following tinters may be required:-

Part No.5240748 Reduced Fast Blue-to colour both face and side tones.
Red tone, use sparingly.

Part No. 5240750 Reduced Blue Black - to colour both face and side tone.

APPENDIX 1, PAGE 4.

Sherwood Green Metallic (Code No.114) Part Nos. 5115563 and 5115564.

The following tinters may be required:-

- Part No.5240749 Reduced Fast Green-to colour both face and side tones.
Part No.5240748 Reduced Fast Blue-to colour both face and side tones.
Part No.5240755 Burnt Sienna - to colour both face and side tones.

Glade Green Metallic (Code No.113) Part Nos. 5115561 and 5115562.

The following tinters may be required:-

- Part No.5240752 Extra Fine Silver - to lighten face tone.
Part No.5240749 Reduced Fast Green-to colour both face and side tones.
Part No.5240778 Fast Blue (Green Tone)-to colour both face and side tones.
Part No.5240751 Reduced Red Oxide - to colour and lighten side tones.

It is essential that only the tinters shown in the list below are used in the adjustment of metallic colours. Reference to the Rootes Service Paint Manual section on the matching of metallic colours will give further guidance in their use.

<u>Part No.</u>	<u>Colour Name of Tinter.</u>
5240730	Scarlet Oxide.
5240733	White.
5240737	Deep Purple Blue.
5240738	Fast Red.
5240739	Fast Maroon.
5240742	Fast Violet.
5240743	Fast Yellow.
5240746	Fast Green Gold.
5240747	Reduced Ochre.
5240748	Reduced Fast Blue.
5240749	Reduced Fast Green.
5240750	Reduced Blue Black.
5240751	Reduced Red Oxide.
5240752	Extra Fine Silver.
5240753	Fine Silver.
5240754	Bright Silver.
5240755	Burnt Sienna.
5240756	Permanent Brown.
5240778	Fast Blue (Green Tone)

CAR SERVICE BULLETIN

CONTINUATION.... WSM.146

MARCH 1967.

Section :

Number :

APPENDIX 1,
PAGE 5.

Subject :

Models :

Lagoon Blue Metallic (Code No. 118).

The following tinters may be required:-

- Part No. 5240753 Fine silver - to lighten face tone.
- Part No. 5240750 Reduced Blue Black - to darken both face and side tones.
- Part No. 5240748 Reduced Fast Blue - to colour both face and side tones.

Laurel Green Metallic (Code No.119).

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240750 Reduced Blue Black - to darken both face and side tones.
- Part No. 5240749 Reduced Fast Green - to colour both face and side tones.

Shadow Blue Metallic (Code No. 121).

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240750 Reduced Blue Black - to darken both face and side tones.
- Part No. 5240748 Reduced Fast Blue - to colour both face and side tones.

Gold Bronze Metallic (Code No.124).

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240755 Burnt Sienna - to colour both face and side tones.
- Part No. 5240746 Green Gold - to increase yellow colour on both face and side tones.
- Part No. 5240750 Reduced Blue Black - to darken both face and side tones.

Lincoln Green Metallic (Code No. 125).

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240749 Reduced Fast Green - to colour both face and side tones.
- Part No. 5240737 Deep Purple Blue - to colour both face and side tones. Very red in tone - use sparingly.

CIRCULATE TO :

SERVICE DIR.	
SERVICE MGR.	
PARTS MGR.	
FOREMAN	
TECHNICIANS	

CAR SERVICE BULLETIN

DECEMBER, 1967.

Section :

WSJ
140

Number :

APPENDIX 1,
PAGE 6.

Subject :

TINTERS FOR
COLOUR CODE
126-131
INCLUSIVE

Models :

HUNTER AND
IMP RANGE

Claret Metallic (Code No. 126)

The following tinters may be required:-

- Part No. 5240752 Extra Fine Silver - to lighten face tone.
- Part No. 5240739 Fast Maroon - to deepen both face and side tones.

Turquoise Metallic (Code No. 127).

The following tinters may be required:-

- Part No. 5240752 Extra Fine Silver - to lighten face tone.
- Part No. 5240778 Fast Blue (Green Tone) - to colour and deepen both face and side tones.
- Part No. 5240749 Reduced Fast Green - to colour and deepen both face and side tones.

Golden Sand Metallic (Code No. 129).

The following tinters may be required:-

- Part No. 5240754 Bright Silver - to lighten face tone.
- Part No. 5240755 Burnt Sienna - to colour both face and side tones.

Gunmetal Metallic (Code No. 130).

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240742 Fast Violet - to deepen and redden face and side tone.
- Part No. 5240737 Deep Purple Blue - to deepen and blue face and side tone.
- Part No. 5240750 Reduced Blue Black - to deepen face and side tone.

Agua Metallic (Code No. 131).

The following tinters may be required:-

- Part No. 5240753 Fine Silver - to lighten face tone.
- Part No. 5240778 Fast Blue (Green Tone) - to colour both face and side tone.
- Part No. 5240750 Reduced Blue Black - to deepen and darken both face and side tones.

CIRCULATE TO:

SERVICE DIR.
SERVICE MGR.
PARTS MGR.
FOREMAN
TECHNICIANS

CAR SERVICE BULLETIN

OCTOBER, 1967.

Section :

WSM
Number :

146

Appendix 3

Subject :

Applying
Exterior
Decorative
Line

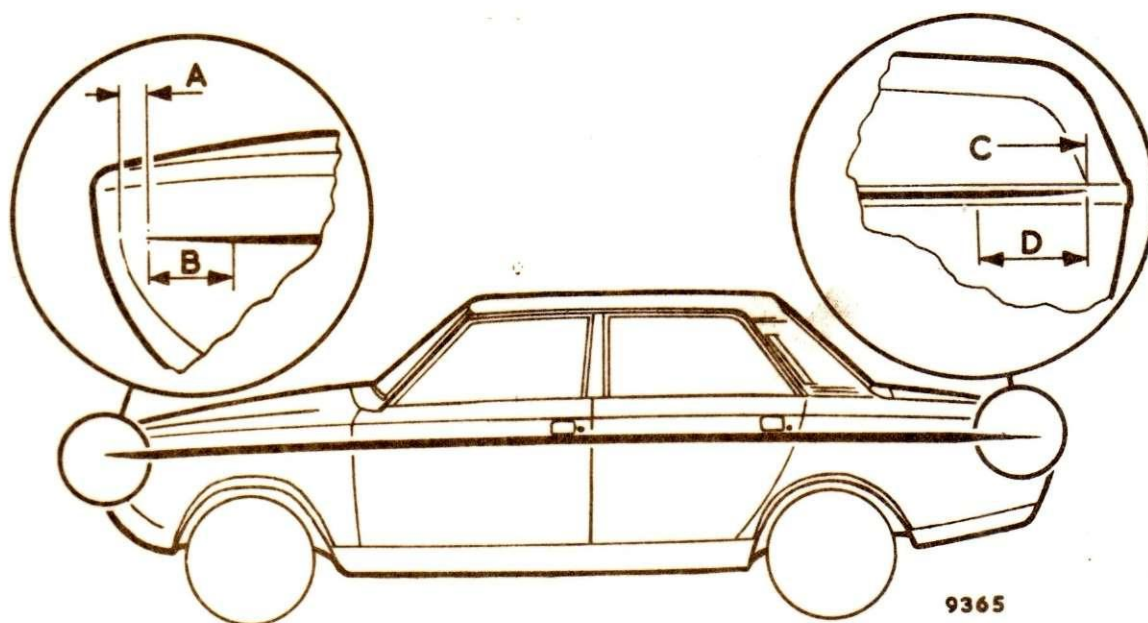
1. The area to be lined must be given a spirit wipe followed by a wipe with a clean dry cloth.
2. The line marking tape is applied and pressed firmly on to the body panel. For the correct line position on the body, see Fig. 1. Sceptre: Fig. 2. Stiletto.
3. To remove the coloured centre strip, raise the tape slightly at one end and cut both sides of the coloured tape(s) with a sharp pair of scissors. Hold the clear tape down and peel away the coloured tape(s).
4. Sceptre: At both front and rear, lift about three inches of the lower tape and reposition to form a taper feather edge. See Fig.1 inset. On Stiletto mask the ends of the line at 45° as shown in the insets of Fig. 2.
5. Dry scuff the area to be lined using No. 400 wet and dry paper. This is done by drawing the thumb covered with the paper along the projected line(s) once; this also lays down the edges of the masking tape.
6. Clean off with a dry clean cloth.
7. Mix 3 parts of specified lining paint to 1 part retarder thinners. Apply one coat of this lining paint commencing at door edges etc: with a chisel edge sable brush to obtain a square finish to the line. Fill in using a sable sword liner.
8. Immediately the line is complete, remove the mask. The mask must be removed as soon as possible and certainly within minutes of application of the paint.

During the painting operations the brushes must be kept in a suitable condition by easing if necessary with retarder thinners. This softens the brush without causing the paint to 'flash off' too quickly. Ordinary thinners are not recommended for this purpose.

Paint (1/5th pint tins) Retarder thinners & line marking tape are available from Rootes Motors Parts, Birmingham.

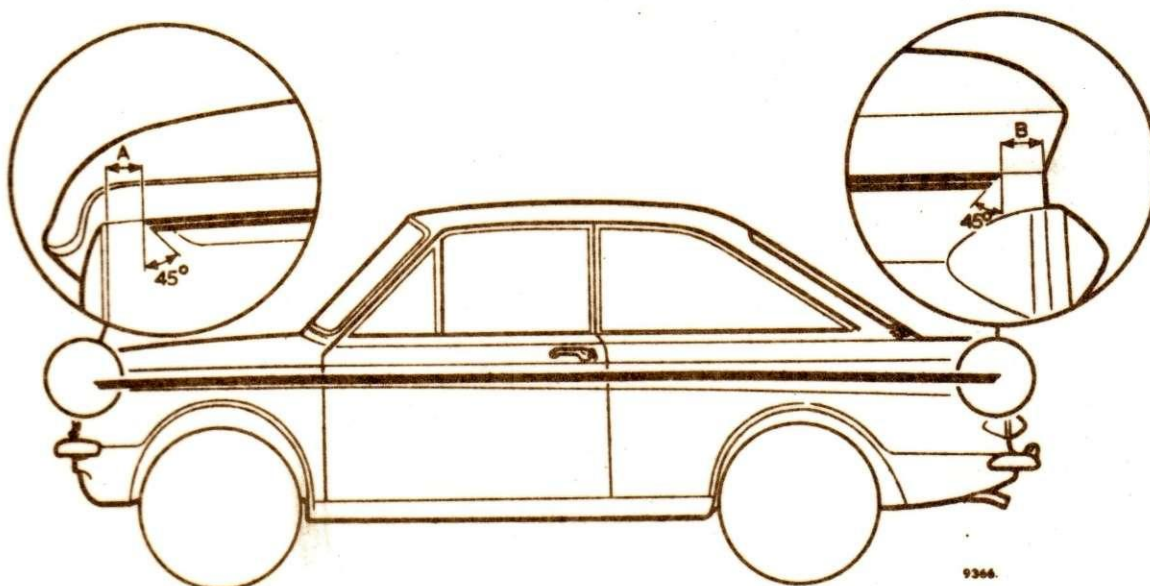
Models :

Sceptre and
Stiletto



A = .75 in. C = End of reveal
 B = 2.5 in. minimum D = 2.5 in. minimum

Fig. 1 Sceptre Decorative Line



A = 1.25 in. B = 1.5 in.

Fig. 2 Stiletto Decorative Line

I.C.I. 'BELCO' AND 'DULUX' BLENDING CLEARS

PO17-713 FOR 'BELCO' METALLICHROME PO31-LINE

PO17-719 FOR 'DULUX' LOW BAKE PO79-LINE

New Metallic Matching Technique for Refinishers

Metallic car colours continue to grow in popularity. Following extensive research, I.C.I. can now offer two Blending Clears to assist in metallic matching.

The principle of the new technique is to reduce the opacity of the repair paint by the addition of Blending Clear, so that the original background colour will influence the colour of the repaired area.

'Belco' and 'Dulux' Blending Clears are ready for use, and should be added to the thinned finish, as set out below.

1. Panel Repairs

Thin 'Belco' PO31-line or 'Dulux' PO79-line in the usual way. Spray one or more coats over the undercoated area to give opacity. Add the appropriate Blending Clear in the ratio of two parts of thinned finish to one part of Blending Clear. Apply two or three coats (a single and a double pass in the case of 'Dulux' Low Bake) in the normal way over the whole panel.

2. Fade-Out Technique

If the above system does not give an acceptable match, a 'fade-out' can be made on the panel under repair, or on the adjoining panels. The area of 'fade-out' must first be compounded with 'Belco' 2B Rubbing Compound, wiped off with SBP3 Petrol, and tack ragged. Using the same mixture of thinned paint and Blending Clear, gradually 'fade-out' over a section of about 9" width. Extra Clear may be added during the final stages of the operation if necessary. Finally the edge is misted over either with neat thinner, or a 10/90 paint/thinner mixture. Only light polishing should be necessary after drying.

3. Spot Repairs

In some cases, the 'fade-out' technique will also be suitable for spot repairs.

The 'fade-out' technique can also be used for matching 'straight' colours in either 'Belco' 300 or 'Dulux' Low Bake in cases where the original colour is off shade.

Note - Whilst the mixing proportions of 'Belco' PO31 are usually 2 parts thinned finish to 1 part Blending Clear, it may be necessary in certain instances, with high opacity colours, to increase the amount of clear lacquer up to 1 part of thinned colour to 2 parts of Blending Clear, without impairing the durability.