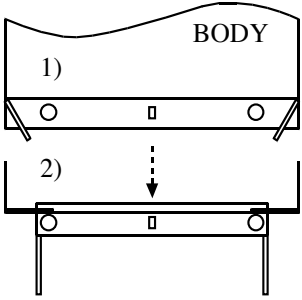
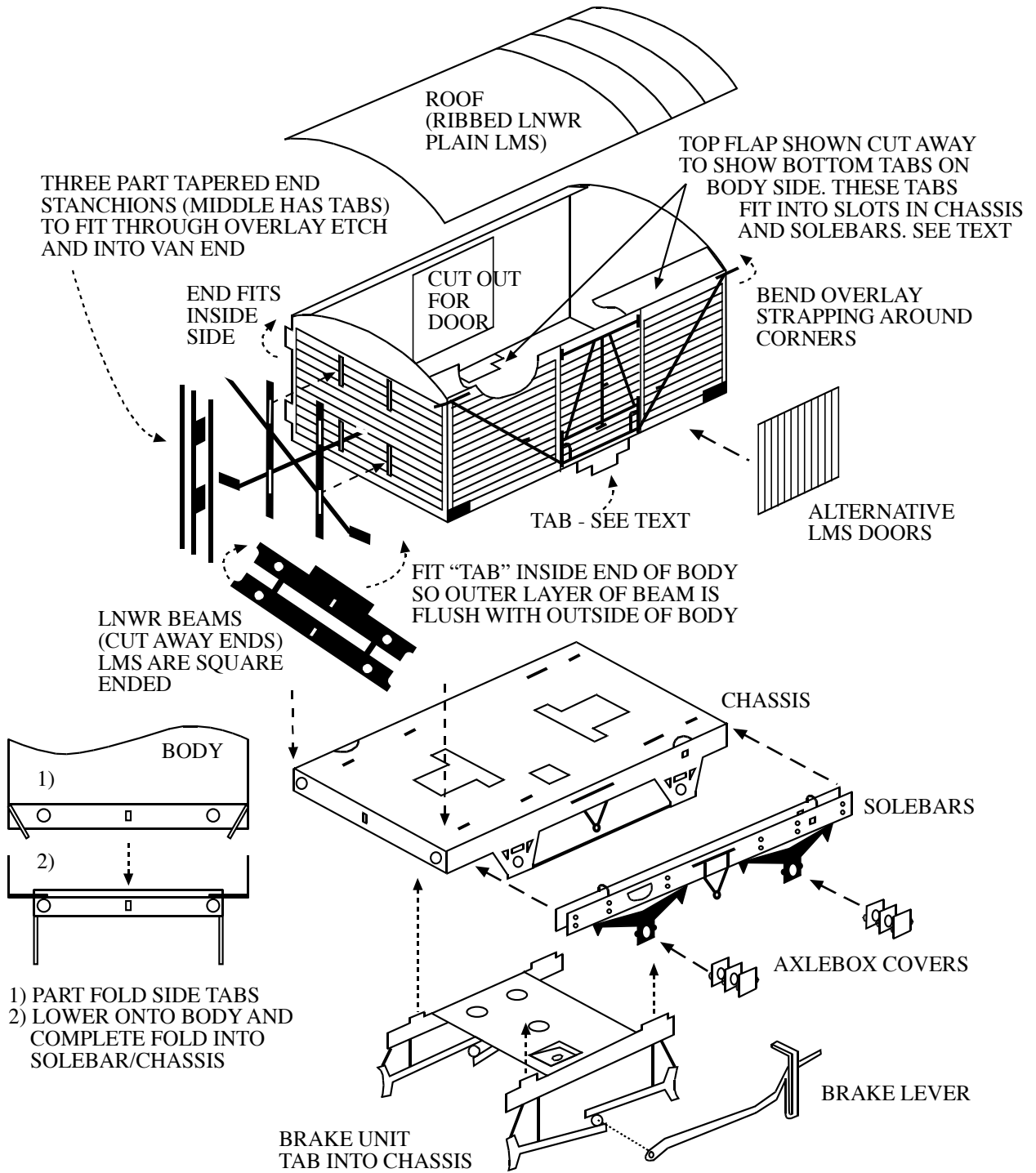


# THE 2MM SCALE ASSOCIATION

SHEET TWO

## INSTRUCTIONS LNWR - LMS VAN - PART S2-519



- 1) PART FOLD SIDE TABS
- 2) LOWER ONTO BODY AND COMPLETE FOLD INTO SOLEBAR/CHASSIS

BRAKE UNIT  
TAB INTO CHASSIS

BRAKE LEVER

# THE 2MM SCALE ASSOCIATION

SHEET ONE

## INSTRUCTIONS LNWR - LMS VAN - PART S2-519

READ ALL INSTRUCTIONS BEFORE YOU DO ANY WORK!!

PARTS ARE INCLUDED TO CONVERT FROM THE BASIC LNWR DESIGN TO THE LATER LMS VERSION.

ALTERNATIVE PARTS ARE:-

SIDE DOORS, ROOF AND BUFFER BEAMS. SEE ALSO NOTE ON BRAKE VEE HANGERS BELOW.

THE KIT IS IN TWO PARTS, BODY AND CHASSIS, BUT NOTE THE HEADSTOCKS FOR THE BODY ARE ON THE CHASSIS ETCH!!.

BODY AND CHASSIS SHOULD BE COMPLETED SEPARATELY PRIOR TO JOINING TOGETHER.

PARTS REQUIRED FROM SHOP 2 TO COMPLETE :-

2-041 TOP HAT BEARINGS 4 No

2-209 OR 2-213 6mm DIA WHEELS ON 12.25mm AXLES - 2 Axles

2-441 BUFFERS (OR YOUR CHOICE) 4 No

2-346 VACUUM CYLINDER IF REQUIRED 1 No

ALSO COUPLINGS, 0.3MM WIRE FOR BRAKE RIGGING ETC.

### HISTORY

THESE VANS WERE IN USE FROM AROUND 1906 UNTIL SOMETIME AFTER WW11.

THE LNWR ROOF (RIBBED) FINISHED FLUSH AT SIDES AND ENDS. THE PLAIN LMS ROOF HAD OVERLAPS. ON PIPED VANS AND ORDINARY STOCK TWO VEE HANGERS WERE USED EACH SIDE, EACH SET OF BRAKES BEING INDEPENDENT.

VAC BRAKED STOCK HAD JUST ONE VEE HANGER PER SIDE AND THE SHAFT CONNECTED THE TWO SIDES LNWR HEADSTOCKS (BUFFER BEAMS) WERE CUT AWAY TO CLEAR THE LONG BRAKE HANDLES. LMS HEADSTOCKS WERE SQUARE ENDED AND THE BRAKE LEVERS WERE MODIFIED IN LENGTH TO SUIT.

### GENERAL

SEE ATTACHED 'EXPLODED' SKETCH FOR GENERAL ARRANGEMENT OF PARTS.

CHECK AND CLEAR AS REQUIRED ALL HOLES FOR 0.3mm BRAKE RODDING ETC. CHECK SLOTS HAVE CLEARANCE FOR TABS. CLEAN OFF TAB REMNANTS.

### CHASSIS

DECIDE VEE HANGER REQUIREMENTS (SEE ABOVE). REMOVE EXCESS IF NECESSARY.

SOLDER TOP HAT BEARINGS FROM INSIDE CHASSIS INTO HALF ETCHED POCKETS.

BEND UP COUPLING POCKETS IF REQUIRED AND FORM CHASSIS ENDS AND SIDES, ENSURING ALL IS SQUARE AND NOT TWISTED. USE KNOWN FLAT SURFACE SUCH AS PLATE GLASS/MDF ETC. TO WORK ON. DO NOT FIT BUFFERS YET!! (BODY HAS TO FIT OVER CHASSIS FIRST).

SOLDER SOLEBAR OVERLAYS TOGETHER, CLEAN UP AND REMOVE 'HINGE' TABS.

SOLDER SOLEBARS TO THE CHASSIS, ALIGNING WITH TOP HATS AND TOP OF CHASSIS.

FOLD UP LAYERED AXLEBOXES AND SOLDER OR GLUE IN POSITION AFTER CLEANING UP ETC.

FOLD UP BRAKE UNIT AND SOLDER IN PLACE USING LOCATION TABS/SLOTS IN CHASSIS.

IF USING VACUUM CYLINDER, FOLD DOWN SUPPORTING PLATE IN THE BRAKE UNIT.

DECIDE WHICH TYPE OF BRAKE LEVER IS TO BE USED (SEE ABOVE). SHAPE BRAKE HANDLES TO MISS AXLEBOXES AND SOLDER IN POSITION USING 0.3MM DIA WIRE THROUGH VEES AS MEANS OF LOCATION. WASH AND CLEAN ALL SOLDERED AREAS.

FIT WHEELS AND ADJUST 'W' IRONS TO GET FREE RUNNING. ENSURE BRAKE SHOES ARE NOT BINDING.

### BODY

DECIDE WHICH DOORS YOU WANT TO USE (LNWR HAVE HORIZONTAL BOARDING, LMS VERTICAL). FIT TO BODY. REMOVE BODY ETCH, FOLD UP AND USING SLOTS/TABS AT CORNER, SOLDER TOGETHER, MAKING SURE THE BODY IS SQUARE. FOLD OVER THE TOP SIDE FLAPS IN LINE WITH THE ROOF PROFILE. THE BOTTOM TABS UNDER THE DOOR OPENINGS SHOULD BE LEFT FLAT FOR NOW!! THESE WILL BE USED LATER TO LOCATE THE BODY TO THE CHASSIS.

CAREFULLY CLEAN UP AND TIN THE SIDE AND END STRAPPING OVERLAYS (NOT TOO MUCH SOLDER!)

CUT THEM OUT 'EN BLOCK' AND POSITION OVER BODY ETCH. SOLDER IN PLACE (BUT SEE END STANCHIONS BELOW) WITHOUT EXCESS SOLDER! NOTE TOP HORIZONTAL STRAPS BEND ROUND CORNERS ONTO THE ENDS. CHECK THIS WITH END STRAPPING TO MAKE SURE THEY BOTH LINE UP, AS THE TOP OF THE END 'X' FITS UNDER THE WRAP AROUND OF THE SIDE PIECE. ALSO NOTE THE BOTTOM PLATES OF THE SIDES OVERLAP THE ENDS.

THE TAPERED END STANCHIONS ARE FORMED FROM ONE CENTRAL TABBED PIECE AND TWO OUTER PIECES. THREAD THE TABS THROUGH THE END STRAPPING AND THE BODY AND BEND OVER THE TABS INSIDE THE BODY. ADD THE SIDE PIECES ONE AT A TIME AND SOLDER TO THE MIDDLE PIECE. NOTE THE BOTTOM OF THE STANCHIONS FINISH BELOW THE BODY AND FLUSH WITH THE BOTTOM OF THE HEADSTOCKS. CHOOSE TYPE OF HEADSTOCKS (LNWR/LMS) AND FOLD UP SO THE EXTENDED FLAP WILL FIT UP INSIDE THE BODY. THE OUTER LAYER SHOULD BE FLUSH WITH THE OUTSIDE OF THE BODY. SOLDER IN PLACE. FIT ROOF NOW? MAYBE BEST LEFT FOR LATER TO GIVE ACCESS WHILE FITTING CHASSIS.

CONNECT CHASSIS TO BODY BY PARTLY BENDING IN (30/40DEG) THE BOTTOM TABS ON THE BODY, AND OFFER UP THE CHASSIS INTO PLACE. LINE UP THE TABS WITH THE SLOTS IN THE SOLEBARS AND COMPLETE THE BENDS TO 90 DEG BY GENTLY PRESSING THE CHASSIS UP INTO THE BODY AS THE TABS SLIDE INTO THE SLOTS. SEE SKETCH FOR THIS AND OTHER ASPECTS OF THE DESIGN/CONSTRUCTION SEQUENCE.

ALIGN THE BUFFER HOLES IN BODY AND CHASSIS AND ADD BUFFERS.

IF REQUIRED TO STRENGTHEN THE BODY, THE BULKHEADS CAN BE USED. FINISH BY FITTING THE ROOF AND WASHING AND CLEANING UP.