



ISO9001 FM38198

FITTING INSTRUCTION

MR4501

Batch 000000

Mercedes ML (W164 - From 2005), ML / GLE (W166 - From 2012) & GL (X166 - From 2013)

Type Approval Number E11 55R-01 10596

COMPONENTS

ITEM	QTY	DESCRIPTION
A	1	Towbar
B	1	Towbar Neck
C	1	Side Arm (L/H)
D	1	Side Arm (R/H)
E	2	Mounting Plate
F	1	Captive Plate
G	1	Support Bracket (LH)
H	1	Support Bracket (RH)
EP	1	Retractable Electrical Mtg Bracket (ZM1490)

BOLT PACK

ITEM	QTY	DESCRIPTION
I	2	M16 x 50 Bolts, Nuts & Washers
J	2	M16 x 50 Bolts & Washers
K	2	M12 x 100 Bolts & Nyloc Nuts (10.9 Grade)
L	4	M12 x 50 Bolts, Nuts & Washers (10.9 Grade)
M	4	M12 x 40 Bolts, Washers & 3 Nuts (10.9 Grd)
N	4	M12 x 40 Bolts, Nuts & Washers (10.9 Grade)
O	4	M10 x 40 Bolts & Washers (10.9 Grade)
P	2	M8 Nyloc Nuts
Q	7	M12 H/D Washers – 30mm O/D x 5mm Thick
R	4	M12 Washers – 23mm O/D x 1.6mm Thick
S	4	M10 H/D Washers – 40mm O/D x 5mm Thick
T	2	M8 H/D Washers – 25mm O/D x 3mm Thick

FITTING PROCEDURE

- ⇒ Lift boot floor covering, remove spare wheel, tool tray and wheel pan carpet. Remove boot side trim panels.
- ⇒ ML (W164): Remove bumper (4 plastic clips securing each wheelarch liner, 1 bolt at each bumper tip, 4 bolts on lower edge, 1 bolt each side behind boot side trim panels (located on bumper to body edge), 2 long nuts through rear panel equidistant of the centre line. Disconnect reversing sensors if fitted (Plug behind trim LHS), pull bumper rearward to release from sliders).
- ⇒ ML / GLE (W166) & GL (X166): Remove bumper (3 plastic clips and 1 plastic nut securing each wheelarch liner, 1 bolt at each bumper tip (Hidden behind liner), 1 plastic peg behind each liner securing bumper skin to body (Vertical position where there is a change in section in the bumper), 4 M8 bolts and 2 push-in plastic clips on the underside. Continue by removing the rear light units (3 nuts and wiring harness on each). Starting at the bumper tips, pull bumper outboard to release from clips along bumper to body edge, continuing into the area around the rear lights and finally pulling rearward. (Note: The clips across the rear panel are notoriously stubborn). Disconnect reversing sensors if fitted (Plug behind bumper LHS),
- ⇒ ML / GLE (W166) & GL (X166): Under vehicle on the RHS, remove plastic shield covering the fluid tank. Lower fluid tank and support. On the LHS lower exhaust silencer and heat shield.
- ⇒ Remove and discard aluminium / steel bumper beam (8 nuts through rear panel of vehicle – 4 accessed from inside vehicle, 4 from under vehicle. Remove foam pads from bumper beam. Hand bumper beam to customer for retention if towbar is removed. On W164 models, remove 'Y' shaped plastic bumper bracket from rear panel. Ensure any underseal is removed from the towbar mounting areas. Try M12 bolts into holes on rear panel – If necessary open up to 12.5mm.
- ⇒ Loosely attach mounting plates (E) to existing holes in the rear panel at the outboard mounting positions (Sandwiching foam pads between towbar and rear panel). Use bolts (M) with heavy duty washers (Q) forward of the panel, except on right hand upper mounting where captive nut plate (F) is used. Ensure the wiring loom does not get trapped at this position. **Note:** On W166/X166 models, support brackets (G) & (H) are also attached as illustrated.
- ⇒ Offer up profiled side arms (C) & (D) and carefully cut access holes through foam pads. Insert profiled side arms (C) & (D) through plates (E), foam pads, and into end of chassis. Loosely attach to existing holes in wall of chassis using bolts (O) with heavy duty washers (S) under the bolt heads. **Note:** The location of these holes varies slightly from vehicle to vehicle – If necessary open up using a cone cutter or similar.
- ⇒ Offer towbar (A) to rear panel/plates (E) and loosely attach using bolts (L) with washers (R) under the bolt heads and h/duty washers (Q) forward of the rear panel. Loosely attach side arms (C) & (D) to towbar (A) using bolts (J) & (N).
- ⇒ Fully tighten all bolts ensuring all components are level. **Note: Bolts (L), (M), (N) & (O) are 10.9 grade bolts and require tightening to a torque of 134Nm.** It is imperative that the chassis ends are sealed to prevent water ingress. On W166/X166 models reattach heat shield, exhaust silencer and fluid tank to support brackets (G) & (H) using existing bolts (X) with nuts (P) & washers (T).
- ⇒ Noting the alternate positions respective of vehicle year, attach towbar neck (B) & retractable electrical mounting bracket (EP) to towbar (A) using bolts (K). **The electrical mounting bracket carries type approval information required by law and must always be fitted as shown.** Please refer to separate fitting instruction (ZM1418/19/20/90) for assembly and use of the retractable electrical mounting bracket. Fully tighten bolts ensuring the towball faceplate remains square & vertical. **Note: Bolts (K) are 10.9 grade bolts and require tightening to a torque of 134Nm.**
- ⇒ Replace bumper and rear lights. Make an incision in the clip in bumper panel as illustrated and replace, alternatively hand back to customer. Replace interior trim.

When fitting this towbar to a vehicle requiring a type approved towbar, a type approved towball with 'D' and 'S' values which match or exceed those of the towbar must be fitted. The horizontal distance from the towbar faceplate to the centre of the ball must not exceed 76mm. The vertical distance from the centre of the towball holes to the centre of the ball must not exceed 75mm.

TIGHTEN ALL BOLTS

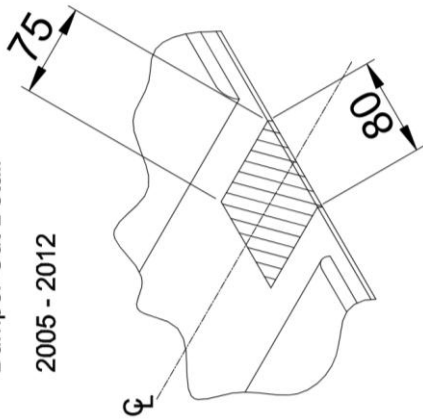
TORQUE SETTINGS ISO Coarse Pitch M8=29Nm, M10=58Nm, M12=102Nm, M16=252Nm
ISO Fine Pitch M8=31Nm, M10=61Nm, M12=111Nm

THE VEHICLE MANUFACTURER'S SPECIFICATION FOR THE TRAILER WEIGHT AND NOSE LOAD LIMITS MUST BE OBSERVED.

FITTING DIAGRAM

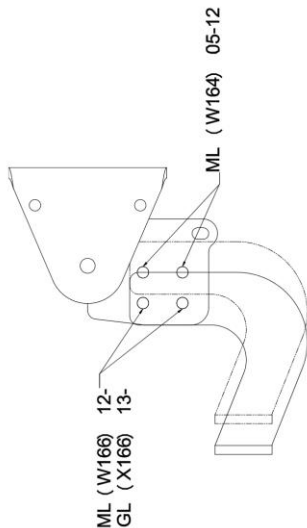
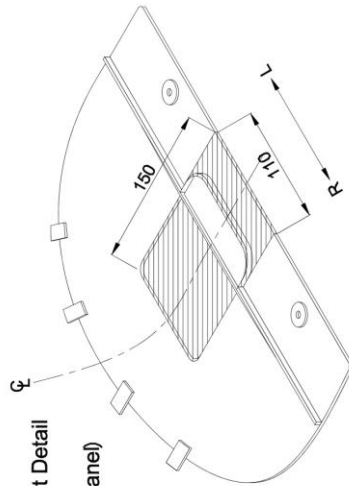
Bumper Cut Detail

2005 - 2012

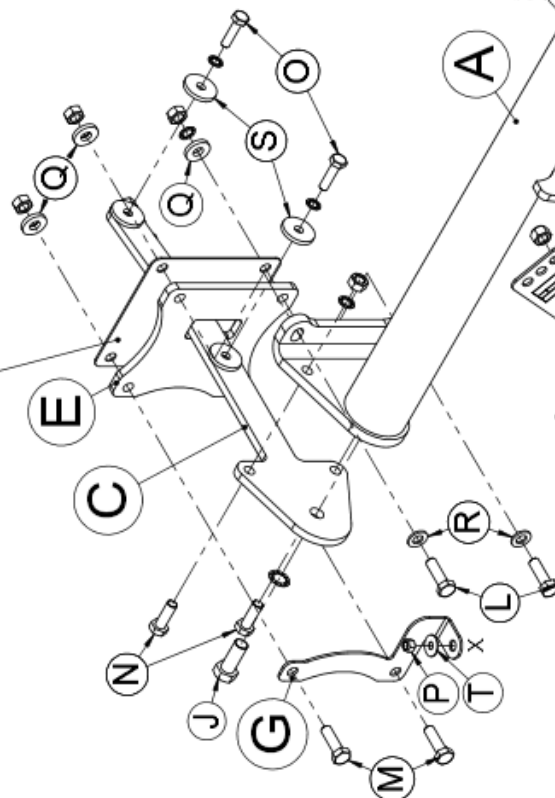


Bumper Cut Detail

2012 > (Panel)

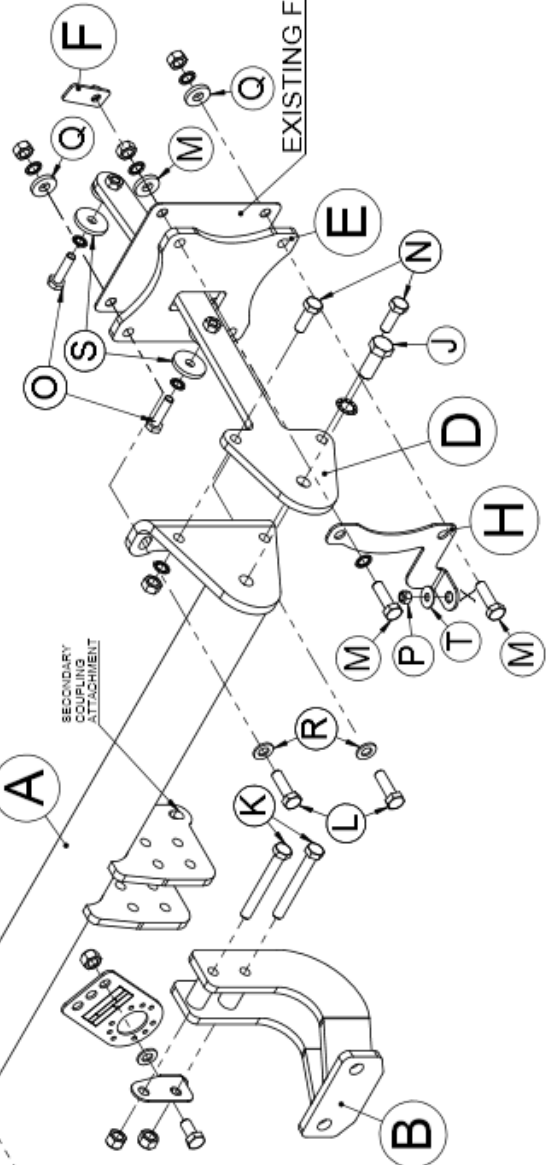


EXISTING FOAM PAD



SECONDARY
COUPLING
ATTACHMENT

EXISTING FOAM PAD



IMPORTANT PRODUCT INFORMATION & GUARANTEE

(TO BE RETAINED WITH THE VEHICLE AND PASSED TO SUBSEQUENT OWNERS)

Thank you for purchasing a PCT Automotive product. Please read the following information carefully before fitting or using your PCT Automotive product.

GUARANTEE

We shall free of charge either repair or at our option replace defective goods where the defects appear

- i. if the goods are a towbar manufactured by us, during the economic lifetime of the vehicle it was first fitted to
- ii. in the case of all other products manufactured by us, within 3 years following the date of your order

PROVIDED THAT (in each case) such defects shall be found to our reasonable satisfaction to have arisen substantially from our faulty design, workmanship or materials and have not arisen by reason of a failure to follow our instructions (whether written or oral), any modification, misuse, neglect or interference with the installation, any damage or abuse to the goods or vehicle by impact or vandalism or by a failure to carry out reasonable inspection, maintenance and/or adjustment.

At all times, the above guarantee is subject to our standard terms and conditions of sale a copy of which is available upon request from our offices.

TOWING LIMITS

Our towbars have been designed for towing up to the vehicle manufacturer's maximum recommended trailer weight and nose load limits for your model. Towing with gross weights above that recommended at any time will invalidate the guarantee and cancel any liability for damage. Towing a twin axle trailer, towing over rough ground or using a bicycle/motorcycle carrier, etc, exerts extreme loads on to a towbar and extra care should be taken in these situations not to exceed the vehicle manufacturer's maximum recommended limits.

PRODUCT IDENTIFICATION MARK

Your product carries a product identification mark. This mark carries important product and batch code information and if the product is type approved it also carries the type approval details which are required by law. Under no circumstances should this mark be defaced, removed or damaged.

INSTALLATION, INSPECTION, MAINTENANCE AND ADJUSTMENT

GENERAL INSTALLATION

- ⇒ All products should only be fitted by competent persons. Electrical products must only be fitted by an experienced auto-electrician.
- ⇒ Read the product fitting instructions carefully and check all components are included in the fitting kit before commencing installation.
- ⇒ Check vehicle for corrosion and/or accident damage. Towbars should not be fitted to any vehicle suffering from corrosion or accident damage or which is not in a roadworthy condition.
- ⇒ Clean off all road dirt, underseal and sound deadening mastic where parts are to fit to ensure correct seating of all components.
- ⇒ Bumper cut information is given as a guide only. Variations in models may occur therefore the fitter should always check that the bumper cut is necessary and of the correct size and shape before commencing with the cut.
- ⇒ All drilling swarf should be removed from the vehicle and all holes drilled in the vehicle should be treated with an appropriate rust inhibitor.
- ⇒ Do not fully tighten bolts before towbar is completely fitted unless instructed to do so in the fitting instruction, this will allow some variances to be overcome before final tightening of bolts.

PAINT & CORROSION

Towbars manufactured by PCT Automotive undergo a phosphate chemical pre-treatment prior to a polyester powder coat finish being applied. For long lasting good looks and in order to prevent corrosion the towbar should be regularly inspected for paint damage and wherever necessary re-painted in an appropriate finishing paint or underseal. The vehicle should also be regularly checked for any corrosion that could affect the towbar installation. Towbars should not be used on any vehicle suffering from corrosion that could affect the towbar installation.

BOLTS

All towbar fixing bolts should be checked initially after the first 300 towing miles, or the initial 500 miles of driving uncoupled, and then every 3,000 towing miles or to coincide with the vehicle manufacturer's recommended service intervals, whichever is the sooner. All towbar fixing bolts should be tightened using an appropriate torque wrench to the settings specified in the towbar fitting instruction.

ELECTRICAL INSTALLATION, TEST/COMMISSIONING AND MAINTENANCE

Failure to comply with the following instructions may cause damage to the towing vehicle's wiring loom and/or towing electrics installation.

Where displacement tap connectors e.g. Scotchlocks, are the preferred method of connection, always use the correct colour coded tap connector for the size of cable to which it is to be connected. All towing relays and modules manufactured by PCT Automotive have cabling with a copper cross-sectional area in the range 0.5mm² to 1mm².

After installation of the 12N/12S sockets, prior to testing, a water displacement agent e.g. WD40 should be applied into the rear connection void through the water drain hole at the bottom of the sockets and also into the front pins under the socket flap. This socket maintenance should be carried out at least twice a year in the spring and autumn.

The towing electrics test procedure must be undertaken with the engine running. If any of the towing relays fail to function correctly, with the engine running and no other vehicle electrical systems turned on, check that the voltage across the vehicle's battery is between 13V and 14V approx, if this voltage is not correct, check the condition of the vehicle's battery/alternator.

Always ensure that the trailer/caravan/lighting board's own electrical systems are installed and functioning correctly before coupling to the vehicle's 12N/12S sockets.

Every six months (spring and autumn recommended) the battery and alternator of the vehicle should be checked to determine correct electrical functioning. All connections of the electrical installation including the earth should be checked for mechanical soundness and electrical quality. Plugs, sockets, relays and fixings should be checked for water ingress, mechanical soundness, electrical quality and general wear and tear.

Please complete the following information to validate the guarantee and for future reference.

VEHICLE OWNER NAME & ADDRESS:

VEHICLE MAKE & MODEL:

VEHICLE REGISTRATION NUMBER:

FITTER NAME & ADDRESS:

DATE TOWBAR FITTED:

If you have any comments or suggestions about the PCT Automotive product fitted to your vehicle, please address them to
PCT Automotive, New Street, Holbrook Industrial Estate, Sheffield S20 3GH or email techsupport@pctautomotive.com
Your comments will help us in our aim to continually upgrade our products to meet the high standards expected by our customers.