

Tel: 07 3897 5700 Fax: 07 3283 1168

ecb@ecb.com.au www.ecb.com.au

29 Snook St Clontarf QLD 4019 Australia Po Box 122 Margate QLD 4019 Australia

> REPLACES: 00.00.00 REVISED: 02.06.16

### EAF169SY

### FITTING INSTRUCTIONS

FORD RANGER SERIES 2
ECB ARC BAR WINCH COMPATIBLE
WITH FOG LIGHTS AND SONAR SYSTEM
VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)
FOR AIR BAG & ADR COMPLIANT VEHICLES

Check installation hardware before commencing.

- 1. Lift bonnet
- 2. Remove four plastic push pull clips from radiator cover on top of grille. Remove radiator cover by sliding hand between grille and radiator support to release clips from front of cover. **See figure 1.**
- 3. Under front of guards, remove four plastic screw clips and one 8mm head screw from rear corner of bumper / guard join. Pull inner guards away from bumper. **See figure 2.** Disconnect fog lights and parking sensor loom (left hand side of vehicle).
- 4. From top of grille near headlights remove two 10mm head bolts each side. Gently unclip grille from headlight. Release clips on each side of the grille by reaching through the inner guard and pressing the three clips forward while applying pressure on the grille. From in front of the car reach behind grille and unclip the six clips along the bottom of the grille behind the bumper. Remove grille. **See figure 3** for clip placement.
- 5. Under front of bumper, remove four 10mm head bolts. **See figure 4.** From on top of the bumper remove four plastic push pull clips.
- 6. Gently pull bumper away from guard to release plastic bumper clips. Remove bumper from vehicle.
- 7. From the back of the bumper remove the parking sensors and the sensor wiring loom and store safely until needed.
- 8. From underneath the vehicle loosen only the two rear 15mm bolts from the under belly guard. Completely remove the front two 15mm bolts. Slide the guard towards the front of the vehicle and remove.
- 9. Remove four plastic push pull clip from front plastic support on bumper support. Remove plastic support. **See figure 5.**
- 10. Unclip connector and remove sonar box. **See figure 6.** Caution needs to be taken not to drop or damage this unit in any way.
- 11. Remove two plastic push pull clips from plastic air dam behind the bumper support and four 15mm head bolts from front of bumper support. Remove bumper support.
- 12. Remove plastic radiator air dams, two 8mm head bolts per side.
- 13. Detached the four lower bumper supports.
- 14. Drill front hole on inside of chassis rail to suit the sizing of the chassis spacing tube (supplied). **Blow filings** clear and treat all exposed metal with a rust inhibitor



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- 15. Fit steel winch bracket (supplied) to front of chassis by sliding down from top of chassis. Rear of steel winch bracket will be tight on outside of chassis. This is an expansion fit. It is important that the bracket is level and lined up square with the vehicle body. Refit two outer original equipment bolts and four M12 x 30 bolts, flat washers, spring washers and nuts to front of chassis rails and two 3/8 x 3 ½ bolts, flat washers, spacer tubes, spring washers and nuts (supplied) to front hole on side of chassis. **See figure 7.**NOTE: Should the chassis mount not be level and square, a hammer may need to be used to realign the front of the chassis at the connection points on the vehicle to achieve a level and aligned mount.
- 16. Using steel mounting bracket as a guide, drill rear hole in chassis to 10mm. **Blow filings clear and treat all exposed metal with a rust inhibitor.** Enlarge inside of drilled hole to suit sizing of steel spacer tube (supplied). Fit 3/8 x 3 1/2 bolts, flat washer, spring washer and nut (supplied).
- 17. Remove nuts and washers from 3/8 bolts on inside of chassis rails. Install winch frame support brackets to rear of winch frame using two M12 x 40 bolts, flat washers, spring washers and nuts. Refit 3/8 flat washers, spring washers and nuts to chassis rails. Align mounts and tighten all bolts.
- 18. Fit winch fairlead to front of winch bracket. Install winch into winch bracket as per winch manufacturer's instructions. A control box mount has been included for the Warn 9.5 winch, which installs to the winch motor using two worm drive hose clamps. For Mean Mother winches, use mounting which is included with winch.
- 19. Trim wheel arch around metallic aerial from drivers side wheel guard, **see figure 8**. Gently relocate the FM aerial as shown in **figure 9 and 10**. Drill 6mm attachment holes in top and bottom holes of aerial and attach using a plastic screw clip from lower inner guard.
- 20. Remove FM booster box from right hand front of vehicle, one 8mm head bolt. Move FM booster box upward and resecure to radiator support using one self tapping screw (supplied). **See figure 11.**
- 21. Hold radiator air dam in position on vehicle. **See figure 12.** Mark and trim minimal amount from air dam to fit around ECB steel mount. Attach wiring for aerial or temperature sensor (dependant on side of vehicle), refit to vehicle ensuring wiring has clearance from moving parts and sharp edges.
- 22. Fit plastic air dams to rear of mounting bracket using M6 x 20 bolts, flat washers and nyloc nuts.
- 23. Disconnect indicator and parking lights on vehicle. Install quick click wiring harnesses (supplied) between disconnected harness and indicator / park lights on vehicle. Run wiring out from under lights ensuring clearance from sharp edges and moving parts.
- 24. Mark and cut grille. See figures 13 and 14.
- 25. Tape outer corners of bumper for protection when cutting and marking out. Check template for correct sizing. Using sharp scissors, carefully cut bumper template from these instructions. Fit template to outer corners and join line of bumper. Mark bumper for cutting. **See figure 15 and 16.** Double check line for correct.
- 26. Carefully cut bumper on marked line. CAUTION: This cut is the final cut. Ensure lines and cuts are straight and clean as cut is not trimmed.
- 27. Mark the bumper side clips ready for cutting. **See figure 17.** Remove bumper side clip from vehicle, two 10mm head bolts. Cut the bumper side clips and refit the front section only. **See figure 18**.



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- 28. Fit cut bumper back to the vehicle using the original side clips and grille side plastic push pull clip.. Install grille to vehicle using original equipment top clips and lower 10mm head bolts. Install guard infill (supplied) to rear of guard using original screws.
- 29. Remove white protective cover from Perspex. Place M6 x 50 bolts, flat washer through holes in Perspex and secure using flat washers and Nyloc nuts. Do not over tighten as Perspex could crack. Fit spacing nut to bolts, install sonar box and ECB sonar mount to rear with mounting legs to lower rear. Fit nyloc nuts to lock into position. See figure 19. NOTE: Caution needs to be taken not to scratch the Perspex as this could affect the correct operation of the sonar.
- 30. Install parking sensors into their respective holes in the bar using sensors mounts provided and install wiring loom through the cut outs in the alloy mounts. Using zip ties provided tighten tie the sensor to the mount, holding it in position. Note: Ensure sensors are held firm but not tight and the face is parallel to the channel.
- 31. Fit sonar mount onto the Protection bar using the two M8 x 25 bolts, flat washers, spring washers and nyloc nuts (supplied). **See figure 20.** Ensure bolts have clearance from channel.
- 32. Fit LED indicator / park lights into protection bar as per instructions supplied with the LED indicator kit. **NOTE: Ensure park light is to outside. See figure 21.**
- 33. Attach ECB fog lights to protection bar. Place M6 x 20 bolts, spring washers (supplied) through light mount from inside and attach nut to top. Slide assembly into light mount in Protection bar and centralize light to hole. **TIGHTEN FIRM ONLY.** Fit ECB fog light trims (supplied) to protection bar. **See figure 22.**
- 34. Attach 6mm clip lock trim (supplied) to top of protection bar, **NOTE**: Trim off lower edge on an angle so trim will sit flush with end of protection bar. **See figure 23, 24 and 25.**
- 35. Fit protection bar to outside of steel mounting bracket using M12 x 40 bolts, flat washers, spring washers and nuts (supplied). **Finger tighten only.**
- 36. Align protection bar to vehicle. See figures 26 and 27. Tighten all bolts.
- 37. Connect and check indicator / park lights, fog lights, parking sensors and sonar box for correct operation.
- 38. Refit under body steel guard using original bolts into steel mounting bracket at front. **Tighten all bolts.**
- 39. Install under body guards to top of lower leg of channel section of protection bar with rear flange pointing down. **See figure 28.** Access to inner hole from side of plate, rear hole from behind inner guard and front outer hole through access hole in under body guard. Use two M6 x 25 bolts, one M6 x 25 bolt and washer on 100mm wire, flat washers and nyloc nuts (per side). **See figure 29.**
- 40. Using under body guard as a guide, drill holes in inner guard to 6mm and attach using two M6 x 20 bolts, flat washers and nyloc nuts (per side). Trim inner guards from bottom of channel to vehicles inner guard removing lower section. **See figure 30.**
- 41. Refit grille- radiator cover using four plastic push pull clips and push gently on the front of cover to seat in position.

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### ENSURE NUMBER PLATE IS CLEARLY VISABLE

**Note:** When fitting/refitting the licence plate to the vehicle, ensure there is no obstruction to licence plate vision in accordance with local authorities. If required relocate licence plate to an alternate location.

### **Further VFPS Notes:**

- a) Do not attach VFPS to the vehicle using anchorages not intended for this purpose (e.g. engine mounting bolts).
- b) Do not use this product for any vehicle make or model, other than those specified by the VFPS manufacturer.
- c) Do not remove the plaque or label from the VFPS.
- d) Do not modify the structure of the VFPS in any way.
- e) No accessory or fitment should project forward of the VFPS forward profile.
- f) ENSURE THESE INSTRUCTIONS ARE LEFT WITH VEHICLE OWNER AND/OR OPERATOR.

### IMPORTANT INFORMATION

Periodically check bolts and nuts for correct tightness, especially if travelling on rough roads

### **FITTING KIT**

| 1 – ECB steel winch bracket                                   | 2 – M8 x 1.5 x 25 bolts                       |
|---|---|
| 1 – Pair winch support brackets                               | 4 – M8 flat washers                           |
| 1 – ECB warn control box mount (WIN_CONT_B4MS)                | 2 – M8 Nyloc Nuts                             |
| 4 – 10Nb x 48 spacer tubes                                    | 12 – M6 x 20 bolts                            |
| 1 – Pair under body guards (marked with "F")                  | 4 – M6 x 25 bolt                              |
| 1 - Pair guard infill (EAF162SY_IC3AL)                        | 4 – M6 x 25 bolt and washer on 100 wire       |
| 1 – ECB sonar mounting bracket                                | 3 – M6 x 50 Bolts                             |
| 1 – Perspex cover 210 X 100 X 2mm (NBF160SY_A2PL)             | 36 – M6 flat washer                           |
| Place Perspex in own bag. Do not package with Bolts and nuts. |   |
| 2 – Worm drive hose clamps                                    | 2 – M6 spring washers                         |
| 2 – Pair sensor mounts (EAF163SY_A3AL)                        | 8 – M6 nuts                                   |
| 12 – M12 x 1.75 x 40 bolts                                    | 22 – M6 nyloc nuts                            |
| 8 – M12 x 1.75 x 30 bolts                                     | 1 – 8 gauge 18-25 pan head Self tapping screw |
| 40 – M12 flat washers   | 1 – ECB indicator park light kit              |
| 20 – M12 spring washers                                       | 1 – ECB Quick click kit (IC15FORAINDH)        |
| 20 – M12 x 1.75 nuts  | 1 – ECB fog light kit                         |
| $4 - 3/8 \times 3 \frac{1}{2}$ bolts                          | 1 – ECB Quick click kit (IC11RAN1004ECBH)     |
| 8-3/8 flat washers  | 2 – Fog light surrounds                       |
| 4-3/8 spring washers  | 1 – 2550mm Length 6mm clip lock trim          |
| 4-3/8 nuts  | 8 – 300mm zip ties                            |



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Figure 1



Figure 2

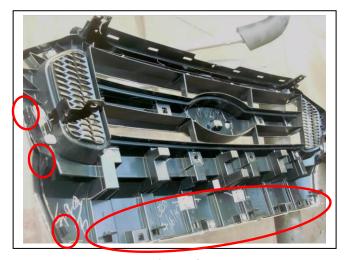


Figure 3



Figure 4



Figure 5



Figure 6



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Figure 7

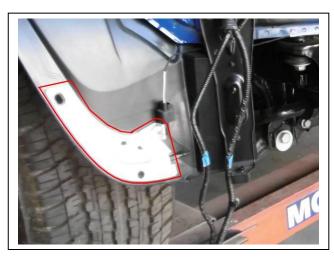


Figure 8



**Figure 9:** Bend aerial carefully to the shape of the dam and drill in the holes already in place



**Figure 10:** Bend aerial carefully to the shape of the dam and drill in the holes already in place



**Figure 11:** Relocate FM booster from hole below to on top of the railing



Figure 12



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Figure 13



Figure 15

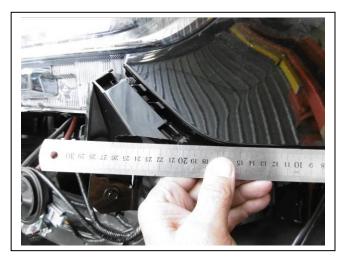


Figure 17



Figure 14



Figure 16

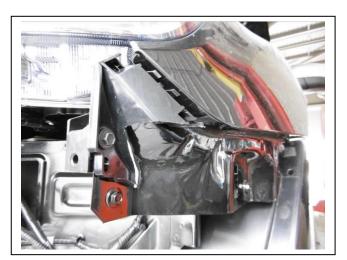


Figure 18



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Figure 20: Attach mount to lower leg of channel

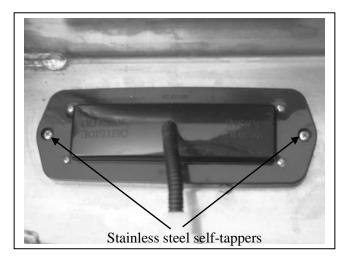


Figure 21

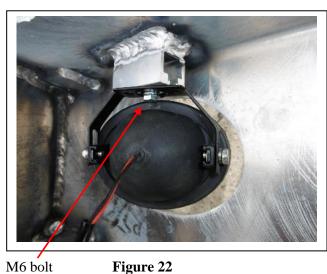


Figure 22

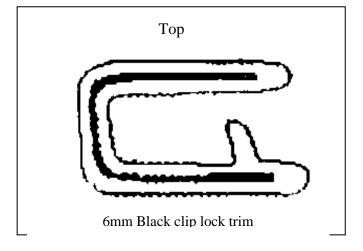


Figure 23



Figure 24

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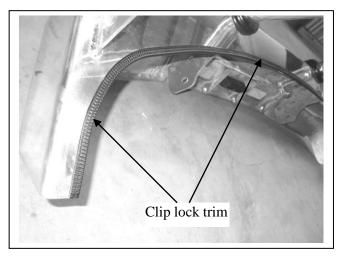


Figure 25



Figure 26: Front View



Figure 27: Side View



**Figure 28:** Placement of under body guard. Bumper removed for photo.



**Figure 29:** Placing bolt in from side of under body guard.



**Figure 30:** Using underbelly guard as a guide trim wheel



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# We value your comments

Dear Fitter,

ECB would like to know how you went with the installation of this product. We value your comment and may need to contact you to clarify some details so please complete your contact details clearly.

We would appreciate if you could complete as many of the following details as possible.

| Your Name:   | Your contact No.                  |                                  |  |
|--|-----------------------------------|----------------------------------|--|
| Product Part No.   | Product Invoice No.               | Product Invoice No.              |  |
| Product Description:   | Make, model, and year of vehicle: |                                  |  |
| Product Work Order No.   | Company your from                 | /Company product purchased from: |  |
| Date of Fitment:// Was the fitting hardware supplied complete? | Yes                               | No                               |  |
| If no what was not supplied                                    |                                   |                                  |  |
|  |                                   |                                  |  |
| Did the installation go well?                                  | Yes                               | No                               |  |
| Please provide comments  |                                   |                                  |  |
|  |                                   |                                  |  |
|  |                                   |                                  |  |
|  |                                   |                                  |  |
| Please draw diagrams if you need to.                           |                                   |                                  |  |

Post to Reply Paid 122 PO Box 122 Margate QLD 4019 **Fax to** (07) 3283 1168

# BUMPER TEMPLATE

Ø CUTLINE BUMPER UNDER HEADLIGHT **BODY LINE** RETAIN MOUNTING **CUTLINE** 

# BUMPERTOGUARD BUMPER TEMPLATE CUT LINE CUTLINE BUMPER UNDER HEADLIGHT SCALE POINTS CUTLINE **BODY LINE**



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# DESPATCH CHECKLIST EAF169SY

| Work Order #                           |                      |                        | See other side of    |
|--|----------------------|------------------------|----------------------|
| Finish:                                |                      |                        | this page for        |
| Transport:                             |                      |                        | photos of all        |
| Due Date:                              |                      |                        | mounts               |
| OC1– Steel w                           | nch bracket.         |                        |                      |
| OC1 – Steel v                          | inch frame support   | brackets (EAF162SY_    | A6MS)                |
| OC1 – pair un                          | der body guards "F"  | cut in front           |                      |
| OC 1 - Pair gu                         | ard infill (EAF162S) | Y_IC3AL)               |                      |
| BK1 – Sonar                            | nount (NBF160SY_     | A4MS) (powder coate    | ed black)            |
| BK2 – Pair Pa                          | rking Sensor mount   | s (EAF163SY_A3AL)      |                      |
|  | ,                    | VIN_CONT_B4MS)         |                      |
| BK2 - worm                             | -                    |                        |                      |
| BK1 – Bolt K                           |                      |                        |                      |
| BK1 – ECB in                           | •                    |                        |                      |
| _                                      | elick harness (IC15F | ORAINDH)               |                      |
| BK1 – ECB fo                           | 0 0                  | N1004ECDII)            |                      |
| -                                      | lick fog kit (IC11RA | *                      |                      |
| OC 2 - 6mm A                           | n Length 6mm clip    | lock trilli            |                      |
| OC 2 - Olilli A                        |                      |                        |                      |
|  |                      | cover (NBF160SY_A      | 2DI )                |
|  | Perspex is not dam   |                        | .21 L)               |
| CAUTION: do not bend                   | -                    |                        | with bolts and nuts. |
|  | •                    | of the bar – see photo |                      |
|  | 1                    | •                      | 1                    |
| In this                                | a product 64ha       | hast it oan ha?? X     | 700                  |
|  | <del>-</del>         | best it can be" Y      | es                   |
| If NO                                  | fix before cont      | inuing                 |                      |
|  |                      |                        |                      |
| All parts <u>checked</u> and <u>co</u> | <u>pleted</u> by:    |                        |                      |
| Nut and bolts:                         |                      | Dat                    | re//                 |
| Order control:                         |                      |                        | re//                 |
| Final wrap check:Date//_               |                      |                        |                      |



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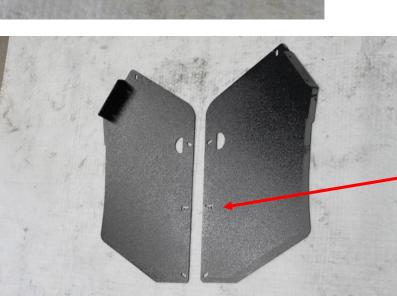
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NOTE: "F" in front edge



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29 Snook St Clontarf QLD 4019 Australia Po Box 122 Margate QLD 4019 Australia





Ensure Wing is wrapped with Ag-Pipe