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ALLEC & LANE MANUFACTURING

INSTRUCTIONS FOR ASSEMBLY OF A & L ULC1 REAR SUSPENSION KIT TO ULTIMA GRAPHITE CHASSIS

First remove the rear bulkhead, gearbox and stock rear suspension. Take the A & L adapter plate and remove the tape holding the mounting template in place. Now take the adaptor plate with template in place and position them on chassis, lining up template holes with rear bulkhead holes in chassis. Insert two long 4mm screws from stock kit through chassis and mounting template, find two flat washers large enough to cover part of adapter plate and loosely bolt down using two 4mm nuts such as the stock rear wheel nuts. Now while pushing the adapter plate to the rear of the chassis to eliminate any play between the template and adapter platel, tighten up the 4mm screws (see Figure A). Do not pay too much attention to how the adapter plate lines up with the outside edges of the chassis, because chassis are cut different widths and the holes are not always centered in the chassis, but are sometimes off to one side.

Now drill four 1/8 inch holes through the chassis. Two through the two front eyes of the adapter plate and two through the two rear. Unbolt and remove adapter plate and template.

- 2. Take and mount template to the bottom of rear bulkhead. Using belt sander, dremel, hand saw or file, shape the bottom of bulkhead to match the template. We suggest you take your time and make a good snug fit. With template removed, check for bulkhead fit into adapter plate. Shape as needed for snug fit. With bulkhead already through adapter plate bolt bulkhead to chassis. Using the supplied 3mm x 10mm button heads, 3mm washers and 3mm nylock nuts, bolt down adapter plate at four mounting points (see Figure B).
- 3. Mount A & L shock tower in place on bulkhead. Then mount A & L shock blocks, body mount and wing mounts to shock tower (see Figure C).
- 4. Mount suspenson hinge post to adapter plate. Note: the posts are two different heights; the shorter post going inboard. Also note hinge pin holes are drilled at an angle (see Figure D).
- 5. Install arm onto mounting posts with 1/8 hinge pins. Snug up 4mm x 6mm button heads and check for free movement of arm. When arms swing freely install set screws and re-check movement. If movement is rough, some deburing may be required on posts or arms. Now that everything works smoothly, take arms back off chassis and install the supplied 5mm x 10mm flanged bearings into arm. It may be necessary to use some small pliers to press bearing into arms.

Now install axles into arms. Stock axle and dogbones, or the various universal types will work with our kit, but note that the axle lengths of all these choices are not exactly the same. So install axle into bearing. Then put on A & L wheel adapter and snug it down with wheel nut. Check play of axle between bearings and shim accordingly using 5mm shims (Delta packages shims), putting shims on the outside between wheel adapter and bearing. Having axle installed and shimed, you are now ready for assembly.

- 6. Install arm, axle and dogbone assembly to mounting post. Double check free movement of arms, Note: you may have to move tranny output cup to insure proper dogbone play and movement. With arms and dogbones moving freely, install 3mm set screws using some locktight
- 7. Install shock onto arm, note it is necessary to use only a stock RC10 shock ball and plastic pivot eye for proper shock mounting into A & L trailing arm. Use supplied 3mm x 14mm button heads for shock mounting at top and bottom. The RC10 shock ball mounts into A & L arm with flanged end going towards the wheel. Use a piece of rubber tubing for mounting the top of shock over the 3mm x 14mm button head.
- We recommend to run the car with a maximum travel giving the car 1-1/2 inches of ground clearance and with a race ready ride height of one inch. Put limiters in the shocks to stop the downward travel of arms at the 1-1/2 inch of ground clearance. Hard plastic tubing is recommended for limiting shock travel. Do not allow arms' downward travel to be stopped by hitting mounting posts of adapter plate as this may cause breakage.

SCREWS - HOW MANY - WHERE THEY GO

- 1 3mm x 4mm Front Body Post 4 3mm x 6mm Wing Mounts & Rear Body Mount Block
 - 6 4mm x 6mm Mounting Posts & Front Body Mount
- 6 3mm x 3mm Set Screws/Wing Mount & Mounting Posts
- 4 3mm x 8mm Shock Blocks to Shock Tower
- 4 3mm Flat Washers/Adapter Plate
- 5 3mm x 10mm Adapter Plate and Rear Body Post
- 4 3mm Nylock Nuts/Adapter Plate
- 4 3mm x 14mm Shock Mounting Upper & Lower

