



How to make your car tow better.

If you're taking your caravan with you this summer, spare a thought for the poor old car.

Not only does it have to pull a much heavier load than usual, but it also has to work in hot summer temperatures.

Leyland ST make a range of towing aids specially for the Dolomite Sprint, Marina and transverse-engined Leyland cars.

The oil cooler kit keeps oil at the right temperature. And that could mean the difference between a trouble-free run and a ruined holiday.

Leyland ST Bump Stop Kits are available for almost all Leyland cars with Hydrolastic® and Hydragas® suspension. They keep the car on an even keel whether it's pulling a heavy load or just your family with their holiday luggage. The rest of the year you'll forget they're there.

ST Pluspacs and Plusparts are available from over 90 Leyland ST distributors and stockists throughout the UK.

For a leaflet and price list phone or write to us at Abingdon.



Leyland ST, Abingdon-on-Thames, Oxon, OX14 1AU. Tel: 0235 25251

*Hydragas and *Hydrolastic are regd. trademarks.

TOWING AIDS FROM



SPECIAL TUNING FOR CARAVAN TOWING

The Leyland image among caravanners has usually been one of good intentions never quite realised. Tony Bradford recently paid a visit to Leyland Special Tuning division to see how their specialist expertise has been used to help the caravanner.

Most people think of Special Tuning as a super preparation workshop staffed by men in white coats dedicated to the production of works racing and rally cars for the top professional drivers. Well it is that but it is much more besides. Their new headquarters at Abingdon is housed in a large warehouse and incorporates offices, workshop, engine tuning bay, rolling road but, most important, rack upon rack of special parts from camshafts to carburettors.

Special Tuning exist to help in the adaptation of any British Leyland vehicle for a special purpose. Caravanning is one such purpose and ST have put a lot of research and effort into improving the towing capabilities of Leyland products. As yet their brief does not cover the Rover and Jaguar side of our national car makers but it does extend to the products of what used to be the BLMC (Austin/Morris) division and Triumph.

ST's development programme for caravan towing has been aimed at those three bogies overheating, lack of power and suspension sag. Towing a heavy caravan especially in hilly country and at high altitudes in hot countries is a prime cause of overheating. Transverse engine cars where the oil also has to lubricate and cool the gearbox and differential as well as the engine are particularly prone to overheating, as are cars with automatic transmission where slip in the torque convertor is the way that a mechanical gear ratio is varied. Because most of British Leyland's cars are transverse engined this has been a particular problem which ST now reckon to have licked.

Oil coolers are available now for all current Leyland cars and many recent models. They are marketed as complete kits with pipes, brackets and the necessary nuts and bolts, and an extra available is a neat cover for use during the winter when the additional cooling is a disadvantage. ST reckon to achieve a

15 degree C drop in temperature through the cooler and they have done extensive testing under hill climbing and idling situations.

Firm recommendations have now been laid down for certain models. For towing overseas in hot or mountainous conditions engine oil coolers are required for the Princess 1800 and 2200 manual models. Kits cost £42.66 and £48.71 respectively. Engine oil cooler kits are also available for the Mini, the superseded 1100/1300 range, Allegro 1100/1300, Marina 1.3 and 1.8, 1800/2200 range, MGB and Dolomite Sprint.

For towing in both UK and overseas the following cars are required to fit transmission coolers: Princess 1800 and 2200 automatic (£42.66), Maxi 1750 automatic and Hi-line (£49.68) and Allegro 1500 and 1750 automatics (£42.66).

Incidentally, to avoid overheating on long climbs of mountain passes, do try and climb steadily in a suitable gear and not let the car labour. This is especially important with automatics. Select L and climb as gently as traffic will allow. If the car does overheat, say ST, pull off the road, open the bonnet and let the engine tick over rather than switch off immediately. If you have a transverse engine car with an electric fan, stop the engine but leave the ignition on the auxiliary position which will leave the fan running. On Marina models an additional electric fan kit can be added in front of the radiator, leaving the existing mechanical fan in place.

Suspension sag is catered for by a whole range of Leyland ST progressive rear bumpstop kits. These are available for every car fitted with Hydrolastic or Hydragas suspension except the old Austin 3-litre at prices ranging up to £18.90. These progressive bump stops are hollow, hard rubber springs which replace the normal bump stops and provide a progressive increase in the springing rate. They give a slightly firmer ride during solo use and prevent the rear of the car sagging under heavy noseweights.

Most Hydrolastic or Hydragas towcars will benefit from the fitting of the additional helper springs, although this will depend on the actual noseweight of the caravan towed.

Perhaps the best advice is to try the outfit first to see if any supplementary springing is needed. The kits can be fitted by any Leyland dealer and in many cases d-i-y fitting is perfectly easy.

For the Marina range stiffer (163 lbf/in) six-leaf rear springs are available to raise the car slightly to compensate for the additional load of towing a caravan. These cost £45.36 the pair and can be used with adjustable shock absorbers which are also available from among ST's comprehensive stock.

Third factor considered by ST for achieving good towing is an increase in performance. For racing and rally cars a wide range of performance equipment is produced, but for better road performance when towing a caravan it is important to obtain an increase in torque (pulling power), not just to raise the power output and make the car less tractable.

The Pluspac A polished head and twin carburettor kits are aimed at doing just this and have the advantage that the original warranty

is not affected. Again kits are available for all Mini, 1100/1300, Allegro, Marina and Maxi models, and the old 1800 series. Pluspacs for the Princess 18/22 series are planned. Prices vary from around the £100 mark.

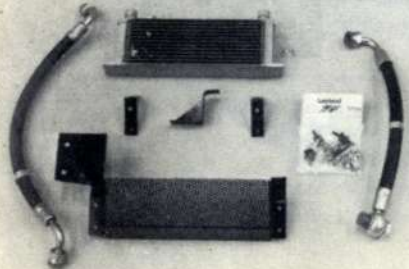
All these Leyland ST parts are available through a network of almost 100 ST distributors and stockists which includes many Leyland car dealers and a number of high street performance centres. But any Leyland dealer from whom you buy a new car can obtain and fit these units either before you take delivery or after. You can even have the work done by ST's own workshop although you will be lucky to get it done in the very near future due to the pressure of work.

Perhaps the most useful of all the services that ST offer is a full technical advisory service for genuine towing problems concerned with the subjects we have been talking about. Write to Leyland ST, Abingdon-on-Thames, Oxon OX14 1AU, or telephone Abingdon (0235) 25251, extensions 211 or 255.

LOADING LIMIT FOR LEYLAND CARS

MODEL	Max car total carrying weight (lb)	Max roof rack loading (lb)	Max towing weight (cwt)
Clubman/Mini Saloon	680	90	8
1100/1300 Range	871	100	15
Marina 1.3	875	100	15
Marina 1.8 and TC	875	100	17.45
Maxi	885	110	17
1800 Range	945	132	20
Allegro (all models)	710	112	15
Princess Series	880	132	20

A typical ST oil cooler kit



Two progressive rear bump stop sets

