DRIVE SHAFTS

Mini Spares actually reproduce the 'S' drive shaft but in a slightly higher specification material. Even these are not strong enough to cope with power outputs being achieved - a problem magnified when used in autocross, rally cross, and rallying. To combat this, Mini Spares stocks two other specifications of drive shafts. Firstly, a competition steel shaft is available to suit both coupling or pot joint type applications utilizing standard Mini or S CV joints. Then a pair of super-competition extra thick shafts that are only made for coupling type applications and using a bigger CV joint negates the requirement of any spacers, it all fits straight into a Mini hub. This set up is literally unbreakable. Both types of shaft are guaranteed for 6 months of competition use.

27H4775
'S' drive shaft right hand (long).

27H4776
'S' driveshaft left hand (short).

MS1248
Pot joint drive shaft, right hand in EN24W (right hand).

MS1249
Pot joint drive shaft, left hand in EN24W (left hand).

C-BTA1265
Coupling type super steel driveshafts

C-BTA1264
Inboard CV type super steel driveshafts (pair).

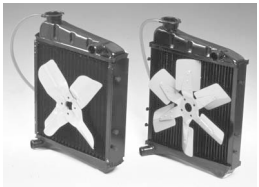
C-BTA1266
Super competition steel driveshafts

37H7869
Large CV joint.

GSV1186
Large CV joint boot.

QL5000
This is an uprated needle roller and nylon driveshaft coupling to replace the standard rubber 'cross'. This is a relatively strong coupling, and has proved very reliable in racing with out-puts up to 110 bhp, where a standard type diff assembly has to be used.

COOLING SYSTEM



One side effect of uprating an engine to increase power output, or even economy, is that extra heat is generated. Unfortunately the standard radiator is only just sufficient to cool the unmodified engine. Early Minis had a 3 core radiator with 13 gills per inch. When the Cooper S was introduced, the number of gills were increased to 16 gills per inch in an effort to increase the cooling capability. This only just contained the extra heat generated by the higher power output, and soon overheated in traffic jams. This S specification radiator was fitted to all Minis as standard when the A-Plus engine was introduced in 1980 as they used high compression ratios - once again the by-product being extra heat.

The situation obviously becomes a great deal worse with highly modified road, rally and race engines.

The basic problem is the lack of water capacity. To this end we have specially produced a radiator that has 4 cores in it, with larger header tanks. This increases the water capacity by just over 27%, and actually increases cooling efficiency by some 35%. The overall dimensions are made to fit the standard cowling, the extra depth being towards the inner wing.
If this is still insufficient on very highly tuned engines, especially large capacity engines, then it will be necessary to fit an auxiliary radiator - a heater matrix being the common choice. This should be plumbed in from the heater outlet and returned to either the interior heater if used, or the bottom hose. Ensure that it is correctly plumbed in, the water out of the head needs to pass down the BACK of the auxiliary radiator and out of the FRONT. If this is not done, then all you are doing is passing hot air across the water returning to the engine - therefore defeating the object of the exercise.

Removal of the thermostat also helps to reduce engine temperature, however a thermostat blanking sleeve needs to be fitted to retain correct water circulation around the entire head. Failure to do so will cause overheating around 3 and 4 combustion chambers - with obviously disastrous results. If the blanking sleeve is used, it is necessary to blank off the by pass hose between head and water pump. The ideal temperature commensurate with optimum power output is 65-70°C.

ARP2000
'S' Specification radiator.

C-ARA4444
4 core high capacity radiator.

C-ARA4442
"Super 2-Core" radiator, fits all applications with no modification to inner fender panel.

C-AJJ4011
Auxiliary radiator (heater matrix).

11G176
Thermostat blanking sleeve.

GTS102
74°C thermostat (165°F).

GTS104
82°C thermostat (180°F).

GTS106
88°C thermostat (192°F).