IGNITION CONTACT BREAKERS

RECOMMENDED GAP SETTINGS

The following are the recommended contact breaker gap settings for all Lucas distributors in current use:

(*a*)	**All single, twin, four and six cylinder contact breakers, except as detailed in (*b*) and (*d*)**	**0.010″—0.012″**
(*b*)	**Single, twin, four and six cylinder contact breakers used on low speed engines or in special conditions of service as described below**	**0.014″—0.016″**
(*c*)	**All double lever type contact breakers (i.e. DULF8A)**	**0.014″—0.016″**
(*d*)	**ALL contact breakers immediately after fitting new contact set, or after fitting new or reconditioned unit as replacement (to allow for initial "bedding-in" of fibre heel)**	**0.014″—0.016″**

ENGINE SPEED AND CONTACT WEAR

The gap to which the contacts of a coil ignition contact breaker are set has a considerable effect not only on the efficiency of the system as a whole but also on the service life of the contacts, especially with regard to the degree of "pitting and piling" produced. (For an explanation of the "pitting and piling" effect see SECTION C-1, PART A, Page 1).

The production of a spark at the plug points depends, among other things, on a certain minimum current flowing in the primary winding of the ignition coil. If the system is arranged to ensure this minimum current at the highest engine speeds, the current in the primary circuit at very low speeds will be considerably heavier, since the contacts then remain closed for relatively long periods. Further, at low speeds the contacts break the circuit comparatively slowly, and sparking at the contacts is likely to be more severe in consequence.

Now it has been found that on, for instance, a car engine, which is continually varying in speed over almost its entire range, wear of the contacts becomes excessive only if the gap is allowed to fall below about 0.010″. On such engines (probably comprising the majority of those encountered in service) the recommended gap setting of 0.010″—0.012″ gives minimum contact wear with adequate performance at the highest speeds.

If, however, such an engine were to be run almost exclusively at low speeds, then it will be seen from the argument of the preceding paragraphs that contact wear would be greatly increased and the service life of the contact set materially shortened.

There are a number of special applications in which, for economic or service reasons, an engine is required to run continually at comparatively low speeds. It will be found that on such an engine a marked improvement in contact life can be obtained by maintaining the gap setting at 0.014″—0.016″.

This increase in gap can also be carried out on any engine which shows signs of excessive "pitting and piling" of the contacts. On certain high-performance sports engines, however, a slight falling-off in performance may possibly be detected at the higher speeds: this disadvantage can be corrected, if the owner desires, by the fitting of a Lucas High Speed type of coil, which even with the larger gap will give adequate performance up to the highest engine speeds.

"BEDDING-IN" OF NEW CONTACT BREAKER HEEL

The initial wear or "bedding-in" of a new contact breaker heel takes place during its first 15 or 20 hours' running. To allow for this "bedding-in" process **all** contact breakers are now despatched from the works with a gap setting of 0.014"—0.016". After the first 15 hours' running, or after the first 500 miles, the gap should be checked and if necessary re-set to its correct value as given overleaf. This precaution should also be taken when fitting a new contact set in service.

DOUBLE-LEVER TYPE CONTACT BREAKERS

Note that the correct gap setting for all double lever contact breakers (i.e. DULF8A, D4A8) is 0.014"—0.016", and after the initial "bedding-in" of a new contact breaker heel the contacts should be reset to this gap.

CLEANING CONTACTS

"Pitting and piling" of the contacts cannot be entirely prevented, but under normal conditions, with the contacts set to the correct gap, the process is slow, and the contacts should require attention only at very infrequent intervals.

The "pile" can be removed with a smooth file or by rubbing the contact on a fine oil-stone, used practically dry. Afterwards clean the contact with a petrol-moistened cloth. There is generally no need to grind down the other contact for the removal of the "pit."