

TECHNICAL

56T-19 Dealer 16 May 2, 1956

To: ZONES AND DEALERS

Subject: ENGINE DETONATION - CLIPPERS 5640-60, PACKARD 5670

THIS SERVICE TECHNICAL BULLETIN IS A SUPPLEMENT TO SERVICE TECHNICAL BULLETIN 56T-14, DEALER 11, DATED APRIL 3, 1956. IN THAT BULLETIN WE ADVISED YOU OF THE ACTION TAKEN IN PRODUCTION EFFECTIVE MARCH 5, 1956 TO ELIMINATE THE ENGINE DETONATION CONDITION IN ALL 56TH SERIES MODELS. AT THE SAME TIME WE GAVE YOU INFORMATION CONCERNING THE DELCO DISTRIBUTOR CONVERSION KIT TO ELIMINATE THE ENGINE DETONATION CONDITION ON 5680 AND 5688 MODELS PRODUCED PRIOR TO MARCH 5, 1956. WE TOLD YOU THAT AN AUTO-LITE DISTRIBUTOR CONVERSION KIT WOULD BE RELEASED FOR USE ON 5640 AND 5660 MODELS BUILT PRIOR TO MARCH 5. THIS SER-VICE TECHNICAL BULLETIN GIVES YOU COMPLETE INFORMATION FOR ORDERING AND IN-STALLING THESE KITS.

Engine detonation has been encountered in a number of 5640 Clippers and a few of the 5660 models because octane ratings of premium gasolines in many areas have not been consistently high enough to prevent detonation in our engines.

To eliminate this condition quickly, we started in production on March 5, 1956, with engine serial number A-11542 on 5640 models and engine B-4497 on 5660 and 5670 models, using Delco equipment in place of Auto-Lite. The distributor being used is part number 6480363 (Delco 1110865) the same as previously used on 5680 models. The specifications for this distributor are shown in Service Counselor Volume 29, No. 13, December 1955.

Auto-Lite Distributor Conversion Kits are now available for use on 5640 and 5660 models built prior to March 5 to eliminate detonation and can be ordered from your parts warehouse under part number 6484607 for 5640 models and part number 6484609 for the 5660 models. The 5640-60-70 models equipped with Delco distributors (Delco 1110865) do not require reworking. We will return to the use of Auto-Lite equipment on these models when the distributor is revised for production.

DISTRIBUTOR CONVERSION KIT INSTALLATION 5640-60 MODELS

- 1. Remove distributor assembly.
- 2. (5640 models) Remove vacuum unit and discard vacuum chamber and spring. Retain the balance of the vacuum unit parts to reinstall on the new vacuum chamber.

(5660 models) - Remove vacuum unit and discard vacuum chamber spring. Retain the vacuum chamber and the balance of the vacuum unit parts to reinstall on the original vacuum chamber.

- 3. Remove the breaker plate assembly.
- 4. Remove felt from top of cam. Remove lock ring and lift off cam.
- Remove weak weight spring and discard. Install new weak spring. Remove heavy weight spring and discard. Install new heavy spring.
- 6. IMPORTANT: Remove name plate. Install new name plate with drive screws provided.
 This is necessary for future service identification.
- 7. Lubricate weight pins and yoke slot with light grease.

(5640 models) - Install original cam on shaft so that anti-rattle spring bears against weight controlled by weak weight spring.

(5660 models) - Install anti-rattle spring on new cam with long end of spring on the same side of cam as it was on the old cam. Install the cam on shaft so that anti-rattle spring bears against weight controlled by weak weight spring.

Do not install lock ring in cam until position is checked.

8. Place rotor loosely in position on cam. Rotor segment should point to the same side as the punch mark on the bottom of shaft gear.

If rotor is turned 1800 from correct position, it may be difficult to time the engine.

To change the rotor position, remove the cam and install the anti-rattle spring on the opposite side. Then reinstall the cam with the anti-rattle spring bearing against the weight controlled by the weak weight spring.

9. Reassemble the distributor using the new vacuum chamber, spring and spring washers (5640 models).

Reassemble the distributor using the new vacuum chamber spring and spring washers (5660 models).

After installation of the kit, the distributor becomes IBJ-4001 E.

- 10. Lubricate the distributor and set the point gap .017".
- 11. Test the distributor in a suitable tester to make certain it checks to the following specifications:

Breaker Point Gap		0	d	0		0	ø	0	0	0 0		0	0 0 0	.01	7"
Cam Angle	0 1				0	4	0	0		0 0		a	. 280	to 3	40
Governor Advance	0	0	0	0		0 9	6	0		0 0	Starts	@	600 E	ng. R	PM
(Crankshaft Degrees)	0	0	0	0	0	o 6		0		160	Advance	@	1800	Eng.	RPM
(Crankshaft Degrees)	(0)	0	0	0	0	e c		0		240	Advance	@	4000	Eng.	RPM
(Crankshaft Degrees)	0	0	0	0	4	0 0				280	Advance	@	5100	Eng.	RPM

If governor advance is more than 2° at 750 engine RPM, increase tension on weak spring by bending spring post. If advance checks too low at this RPM, decrease tension on weak spring.

If governor advance checks too high at 4000 engine RPM, increase tension on heavy spring by bending spring post. If advance checks too low at this RPM, decrease tension on heavy spring.

Vacuum Advance Starts @ 8 in. hg.

(Crankshaft Degrees) 120 Advance @ 12 in. hg.

(Crankshaft Degrees) 200 Advance @ 16 in. hg.

It may be necessary to add or remove vacuum unit spring washers to obtain 12° advance at 12 in. hg.

12. Install the distributor on the engine and set the timing at 5° BTDC. In some cases, depending on mileage and carbon deposits, timing may be set a few degrees above or below the recommended 5° setting.

If engine detonation is still present after installation of the kit and setting the timing as described under (12), it undoubtedly will be due to excessive carbon formation, rough combustion chambers or shaft edges in the cylinder heads. Obviously, then, any such conditions must be corrected to entirely eliminate the detonation.

You may submit a claim to us for the installation of Auto-Lite Distributor Conversion Kits using the customary RFA form. Credit will be allowed for your cost of the kit plus 1.3 hours labor to cover removal and replacement of the distributor, kit installation and testing and setting ignition timing.

Very truly yours,

J. W. Nertney,

Service Technical Manager

HGL :mu