

SERVICE BULLETIN



SERVICE DEPARTMENT
DODGE

DIVISION OF CHRYSLER CORPORATION

TO ALL DIRECT DEALERS AND DEALERS:

Detonation (spark knock) is the signal that a hazardous condition is occurring within the engine and one which should be immediately corrected before damage occurs.

Dodge Truck engines were designed for the use of pre-war gasoline and, if in proper condition, detonation was not a problem. However, with the use of the present day lower octane gasoline, it may be encountered. Because excessively high pressure and extreme heat are present in the combustion chambers in engines which detonate, the following difficulties are very likely to occur.

1. Blown cylinder head gaskets. The edge of the gasket around the cylinder bore will burn, so weakening it that it may blow out between two cylinders or between the cylinder bore and a cylinder head stud or bolt. An examination of the gasket may also show an indentation which has the appearance of the piston striking it.
2. Piston rings sticking in the piston grooves. The high compression chamber pressures cause excessive blow-by. This will increase the temperature of pistons and rings, causing damage to the piston lands as well as excessive deposits in the grooves.
3. Pistons damaged. The following may occur.
 - a. Holes burned in pistons.
 - b. Edges of pistons burned.
 - c. Second land from top of pistons burned and broken.

As a remedy, it is suggested that the engines be first checked over and tuned to be sure it is in peak operating condition. Then the ignition timing should be retarded to a point where detonation is practically eliminated -- leaving only a slight spark ping under heavy acceleration -- and yet where the power is not seriously affected. This should be done on the road with the truck fully loaded and using the gasoline regularly used in the truck, as only in this way can the most satisfactory setting be obtained.

Feb. 19, 1945

No. D-126

DETONATION

All

Trucks

Feb. 19, 1945

No. D-126

No definite recommendations of exact timing setting can be given as it will vary with the operating conditions and gasoline. We have found, however, that 8° retard from the factory setting is about the limit before the power is materially affected.

DETONATION

A clean engine will require less retard than one which is heavily carbonized and it may be necessary in some cases to remove carbon more frequently in order to eliminate detonation without retarding the ignition to a point where power is seriously affected.

All

If, in an engine that is free of carbon, the timing cannot be retarded sufficiently to eliminate detonation without an objectionable reduction in performance, extra heavy loads are the probable cause. The only remedy is a sufficient reduction in load.

Trucks

Other remedies have been tried but we have found that, in Dodge engines, retarding the ignition timing is the most satisfactory solution, when using present day gasoline, as it gives the best results with much less loss of power.

J. E. HOPPER
Technical Service Manager
DODGE DIVISION

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TO ALL DIRECT DEALERS AND DEALERS:

In the past, especially in the war years, many engine replacements have been made using either engine assemblies less accessories or engine rebuilding packages.

Such replacement units many times contain later type parts which are different than those in the engine with which the vehicle was originally equipped. If, after such a replacement has been made, engine parts are ordered, using the serial number or model of the truck as a basis for ordering, the parts which will be received may not fit the new engine.

It is, therefore, always advisable when ordering engine parts for a particular vehicle, to determine whether a replacement engine has previously been installed, possibly by questioning the owner, and, if so, to give the model number of the new engine on the parts order. The model number, such as 218,230,237,250, etc., is stamped on a boss on the top or side of the cylinder head opposite number five spark plug and is also contained on a plate attached to the cylinder block at the front end of the motor number pad.

Enter this bulletin number and subject in your passenger car and truck shop manual under Group - Engine.

A handwritten signature in cursive script that reads 'Russell Voppier'.

Technical Service Manager
DODGE DIVISION

Oct. 3, 1945

NO. D-132

ORDERING

PARTS

FOR

REPLACEMENT

ENGINES

8099

Printed in U.S.A.

14765