



CENTRAL FILE COPY TECHNICAL NOTE

T/N-12 TM

Filing Code 1525 (P-401)
Date Issued June 1969

Bureau of Land Management U.S. DEPARTMENT OF THE INTERIOR

AIR CLEANER - OIL BATH TYPE DIESEL ENGINES

Each time a diesel powered item of equipment such as a motor grader or tractor is brought to the shop for service the oil bath cleaner will be given a complete air cleaner service.

A complete air cleaner service involves the following steps:

1. Remove the pre-cleaner (if used) and clean thoroughly.
2. Remove the air cleaner oil reservoir and clean thoroughly.
3. Remove the lower screens from air cleaner body (if used) and clean thoroughly.
4. Remove air cleaner main body from engine mounting. If the main body can not be disassembled, load with diesel engine fuel and purge thoroughly to insure that the inner-mesh is cleaned thoroughly. This operation should be repeated as many times as required to make certain that the accumulation of dirt and abrasive particles have been removed.
5. Clean air intake pipe thoroughly, wipe dry with clean cloth.
6. Install main body on engine mounting complete with screens.
7. Fill air cleaner reservoir to prescribed level with engine lubricating oil (SAE 30 for summer operation) and install on air cleaner. Install air intake deflector or precleaner and secure all connections tightly.

Mechanics should take advantage of every opportunity to check the operating conditions of diesel engine oil air cleaners and make certain that operators are trained, in servicing air cleaners at the necessary intervals.

Some of our motor graders and tractors are equipped with GMC 2-cycle diesel engines. Mechanics should call to the attention of the operators that these engines require twice the amount of clean air used in the natural aspirating 4-cycle diesel engine. On 2-cycle engines the important function of the air cleaner has more than doubled. If it is neglected or improperly serviced, the engine will lose power and run rough, fuel consumption will increase, and maintenance costs will soar for lack of adequate clean air.

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Most motor grader and tractor manufacturers' service manuals require that the engine air cleaner be serviced daily. If conditions are abnormally dusty, the operators must reduce the interval accordingly. If you find that service instructions emphasize the need to clean the oil reservoir and refill it with clean lubricating oil of prescribed SAE rating, but they fail to identify the importance of making sure that the air intake pipe and inner-mesh are clean; mechanics should show equipment operators how the intake pipe can be restricted by the usual collection of dust. Once an operator has been given a graphic demonstration of the restriction caused by a collection of dust and he has experienced the improvement of engine performance after the air cleaner has been properly serviced, we are certain he will voluntarily support the air cleaner servicing program.

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