10-19:73 5,100 L-1149



## RECONDITIONING FLOOD-DAMAGED FARM EQUIPMENT

## Henry P. O'Neal Extension Agricultural Engineer

Silt and clay particles carried in flood water are small enough to get between surfaces of close-fitting machinery parts. These particles settle out in parts of tractors and machines that have been under flood water.

Special care is required in cleaning and reconditioning flooded equipment. Do the cleaning operation as soon as possible. Delay will make dirt harder to remove and may cause considerable rusting and corrosion.

## Tractor

Do not move a tractor that has been submerged nor attempt to turn the engine over because dirt will damage bearings and close-fitting parts. A tractor that has had the engine submerged should be taken apart completely. Each part should be well cleaned by your dealer or in a well-equipped shop. If the engine was not submerged and has no water in it, service only the wheel bearings and other submerged parts.

If you have urgent need for a tractor or engine or do not want to have it reconditioned by a mechanic, use the following procedure. (This procedure is/not thorough enough to prevent damage and eventual need for overhaul.)

• Remove spark plugs, air cleaner, intake manifold and carburetor. Clean and wash these parts thoroughly in kerosene or cleaning solvent.

• Drain the crankcase oil and disconnect fuel lines.

• Crank the engine slowly with the spark plugs removed to force the water out of the cylinders.

• Squirt light lubricating oil into each cylinder and let stand for about 5 minutes. Then crank the engine slowly to spread oil on the cylinder walls and rings.

· Completely flush the fuel system (tank, pump, lines).

The Texas A&M University System • Texas Agricultural Extension Service J. E. Hutchison, Director College Station, Texas · Clean and dry the starter and generator, or replace them.

• Drain and flush the transmission and final drive with kerosene. Refill them with new, clean oil.

• Remove all wheel and track bearings that do not have positive seals and clean with kerosene or solvent. Replace them and lubricate with new lubricant. Factory-sealed bearings should not require cleaning if the seal is not broken.

• If dirt in the crankcase, transmission, or gear train was substantial, change the oil after a few hours of operation.

## Farm Implements

Before trying to operate any machine, inspect it carefully and remove all dirt and debris. If the implement has an engine that has been submerged, do not attempt to even turn over the engine. Follow the procedure outlined for tractor engines.

Carefully clean all exposed gears and sprockets with kerosene or solvent and coat with light oil. Clean all chains by soaking and dipping them repeatedly in a bath of kerosene or solvent. Soak the chains in a bath of light oil before replacing them. Examine all belts and repair or replace them if necessary.

Inspect enclosed gear cases for water or grit. If you think water or grit may be present, drain gear cases, flush with kerosene and refill. Clean and oil or grease all bearings that do not have protective seals. Non-sealed bearings with pressure grease fittings sometimes can be cleaned by merely forcing grease into them until a considerable amount has oozed out from the sides of the bearings. Remove the excess grease. Caution: Some sealed, factory-lubricated bearings are equipped with grease fittings. The seals of these bearings may be damaged if grease is forced out through them.

Remove knives from mowers and choppers. Clean and dry the knives and cutter bars, coat with light oil and reassemble. Remove all accumulations of dirt, debris or water.

Clean all dirt and rust from the surface of soil-working tools such as moldboards, disks and cultivator shovels. Coat them with rust-preventive compound, grease or oil.

Remove hay from balers. Clean and oil the bale-chamber surfaces and automatic tying machines. If disassembly is needed for thorough cleaning, let an experienced serviceman do it.

Educational programs conducted by the Texas Agricultural Extension Service serve people of all ages regardless of socio-economic levels, race. color. sex. religion or national origin.

Cooperative Extension Work in Agriculture and Home Economics. The Texas A&M University System and the United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8, 1914, as amended, and June 30, 1914. 5M-7-73 SAF & CD