After disassembly of the governor, start the cleaning of parts with a clean container of clean solvent. Wash ball bearings first. Do not spin bearings while washing. Turn them slowly back and forth while dipping the bearing up and down in the solvent to dislodge dirt. Blow out with compressed air, holding the parts to prevent the air blast from spinning them, to avoid possible scratching of balls and grooves. Flush again in clean solvent and blow-dry a second time. Examine under good light to determine if further cleaning is necessary. Add a few drops of oil to the balls and grooves, then, and only then, spin by hand to test for roughness and wear.

Wash and clean the remainder of the rotating parts in solvent, examining the weights, carrier and weight pins for damage or wear. Clearance between new weights and new pins for each governor is .001 to .004 inch. Clearances found to exceed those specified by 0.003 inch or more would be considered excessive and parts should be renewed.

Wash and clean the housing and remaining parts and examine each for damage or excessive wear. No attempt should be made to salvage old gaskets or seals. They should be carefully removed from the assembly and replaced with new to insure an oil tight, dust proof operation.

Where sludge accumulations are found in the governor housing, corrosion of bearing surfaces may have occurred. These rough bearing surfaces and their increased frictional drag are responsible for poor governor action. Excessive bearing clearance also results from sludge corrosion.

The decision on what new parts should be used to rebuild the governor assembly will be based upon the wear found and the condition of the following groups of parts:

1. Weights, pins, and weight carrier: Clearance in excess of 0.003 inch over that specified between pins and weights or carrier.

2. Governor shaft bearings and thrust bearing: Rough, pitted bearing surfaces of either plain or ball type bearings.

3. Rockshaft, rockshaft fork, bearings and levers: Worn or damaged rockshaft, rockshaft fork or spring levers. Rough, pitted bearings and bearing surfaces.

Where all three conditions are found, the use of new complete governor assembly should be considered, since the few parts which can be salvaged may not cover the labor cost of overhaul.

Where conditions 1 and 2 are involved, the rotating assembly, including new bearings, weights and pins, should be used.

Where only the governor weight and pin clearance is found questionable, only these individual parts need be replaced. In all cases new gaskets and new seals must be used to prevent entry of dirt and loss of oil.

Examine hook ends of governor springs and mating holes in spring levers for wear. Replace these parts where appreciable wear is found.