

RESTORATION OF AN OLIVER 60 ROW CROP

By Dave McClary



Preface: This account was originally published in the QVEA monthly newsletters starting in 1993 as an ongoing account of the restoration. It has been condensed and edited for continuity and is published here for those who may find it interesting or missed the original tale.

In June 1993 at a Bethlehem, CT Lions Club antique tractor show, a very rusty Oliver 60 Row Crop tractor that had just arrived was being admired. These handsome tractors were built from 1941 to 1948 as the smallest of the Oliver range of row crop and standard models. Along with other major tractor manufacturers, more modern industrial design practices about this time resulted in a streamlined appearance not unlike the automobiles of the late 1930's. A tractor pulling friend walked up and asked if I liked the small Oliver 60. When I said yes, he said that he had one to sell along with a parts tractor. Arrangements were made to go look at the two jewels in the rough. It turned out there were no rear wheels, the engine was stuck, and of course a side panel and grill screens were missing. But the parts tractor that was in much worse shape did have the grill screens. That, along with a 25% reduction in price because of the stuck engine, sealed the deal. An Oliver collector acquaintance in Maine was contacted and the two

rear wheels needed were purchased, they being the 32 inch size and unique to the Oliver. After getting new tires put on the wheels and hauling the two tractors home, the job ahead was surveyed. The parts tractor was found to be a 1948 model while the "good" one was from late 1944. It was that year that the transmission was changed from a four speed to a five speed with two speeds in reverse. This was accomplished with a simple added on gear at the front of the transmission. The resulting shift pattern resembled two traditional "H" patterns, one above the other. It was learned that the two tractors had come from one of the vegetable farms near the Bradley airfield. The engine on these tractors sits well forward on the frame, there is a sheet metal bell housing and a short shaft to the transmission. There is a power lift on top of the transmission that is activated with a foot pedal. It rotates a shaft with arms that link to the implements such as the cultivators. First thing done was removal of the set of cultivators that were mounted on the tractor. Then an almost complete disassembly of the tractor was started, noting the things that needed more than cosmetic attention. There was a brake spring and assorted other items found in the bottom of the transmission which had to have been put there by someone in the past. Three of the transmission bearings had to be replaced. Having found water in the transmission as well, a 1/4 inch steel plate was made to fit under the regular sheet metal cover. The tractor frame had to be patched under the battery due to corrosion. Engine disassembly showed number three cylinder had water entry from a missing exhaust pipe cap. The piston and sleeve assembly came out as a unit and were separated later. The front crankshaft seal was found installed in back of the timing gear, a sign of a previous master mechanic at work. The lack of engine parts availability for the 60 at the time was cause for concern, but each problem encountered was overcome. The wet sleeves were worn and lacking replacements, these were bored out .030" oversize. New oversize aluminum pistons for a Continental engine were found to replace the original cast iron ones. The crankshaft was ground and new bearings fitted. The head has overhead valves and this was overhauled by an auto mechanic who made new valves from Oldsmobile diesel exhaust valves. A generic thermostat in a homemade cage and a Zetor tractor water pump seal were made to work just fine. The starter motor and generator were made to work with cleanup of commutators and wiring harness refurbishment. A certain advertisement for decals provided some misleading information on paint colors. While talking to an Oliver collector out in Iowa, the correct shade of green was learned as well as the paint schemes for wheel hubs and grill center bar. The Hart-Parr Oliver Collectors Association apparently researched this and came across a movie showing the factory painting process. New replacement side panels and some professional help with sheet metal and wheel painting contributed much to the appearance. The front wheels were very pitted but replacements could not be found. However, John Deere M front wheels were a close match. Doughnut shaped front wheel weights were made and fitted inside the wheels like the factory weights and this compensated for a wheel offset problem. A new under hood muffler had to be fabricated to replace the original. The fenders were too far gone to salvage and it was decided not to replace them and the lights normally mounted on top. A visit to the Rough and Tumble show in Kinsers, PA. in August 1995, when they featured Oliver and predecessor Hart-Parr tractors kept the project motivation up and moving over a slow period. The tractor was finished in time for the April 1996 Belltown show where it won the best tractor award. The restoration turned into a much bigger job

than originally anticipated, but what job like this hasn't. Overall, the results were quite pleasing. A set of wheelie bars and a pulling hitch were fabricated to make the tractor ready for some pulling, a then favorite activity.

When running the Oliver in fifth gear, it became obvious that the governor wasn't functioning properly. It pulled okay at the spring crank-up at Hebron in June, but on longer pulls at Granby, MA, the throttle wasn't opening fully. The service manual states you set the linkage to achieve a maximum RPM of 1650 at no load with the lever fully advanced. Initially, full RPM came with just a small movement of the throttle lever. Modifying the linkage, the lever was less sensitive but there was still inadequate throttle opening. The typical variable speed governor works on the principle of flyweights opposing the spring on the throttle lever linkage. As RPM increases, the flyweights overcome the spring force partially closing the throttle plate at the carburetor. Since a similar problem on both an Allis-Chalmers CA and a John Deere M had been experienced, the governor was disassembled and examined. There had been sufficient wear that most of the movement of the fly weights was not being translated to the fork on the throttle arm to the carburetor. This was corrected by inserting a hardened spacer and thrust washer to take up almost all of the slack, about $5/32$ of an inch. The throttle lever spring is long and large in diameter, and not to be found in a hardware store assortment. So to make up for an unknown amount of loss of tension due to fatigue, lengthening one of the linkage arms to effectively provide more spring force with throttle movement was tried. Finally there was a nice smooth increase in speed up to 1700 Rpm at full throttle. Now there was very good throttle response driving in fifth gear and no lack of power when pulling. The tractor weighed 2340 pounds with this driver on board and made a full pull with the stone boat at 7750 pounds at one of the pulls that year, making it competitive with other tractors in the class. This was definitely a keeper.