

Synopsis - Second Edition

Here we finally have a full-blown repair manual for all versions of the John Deere Model "H" tractor. This book is organized into nine chapters supported by twelve appendices and a 600+ entry Subject Index listing. I haven't counted the number of illustrations, but be assured there are plenty pictures and drawings to help you become eminently familiar with your JD "H".

This book includes many references to Field Service Bulletins and to earlier "DIR" series technical books -- both issued by Deere & Co. "over the years". Some are of interesting historical value while others bear significant & needed technical data not found in any of the three manuals you should also have: Operator's Manual, Parts Catalog and the JD-4 I&T Shop Service Manual.

Chapter 1 - Basics, Tooling and Facility -- Restoration and its variations are discussed along with approaches to initial cleaning, choices you should make up front with emphasis of writing your plan, and the concept of a journal is introduced. Planning should include where you will look for needed parts, services and supplies; and arranging for storage during tear down. Emphasis is placed safety, protecting parts of high value, care and identification of special fasteners, and on the method of restoring fasteners. Tooling you will need is defined along with two versions of a flywheel wrench you can make. The chapter closes with a partial listing of JD "H" parts that have become scarce and costly -- to guide you in working with them!

Chapter 2 - Sheet Metal -- This chapter was prepared apart from the "main tractor" in response to so many questions fielded over the years, and includes guidance for removing, reworking and reinstalling sheet metal and associated elements of the tractor like fuel tanks, shutter controls and gauges. Three major parts into the chapter deal with fuel systems and pitfalls to avoid, the right gauges for your JD "H" tractor (yes - gauges are "year-dependent"), and decals. With decals, we find they too are year-dependent and easy to misplace. Full illustration is provided to guide you in decal placement.

Chapter 3 - The Engine -- The chapter opens with a wide range of basic information to help the reader get to know the JD "H" power plant! Topics include but are not limited to the lube system, crankcase ventilation, air filtering, carburetion, cooling, anti-freeze issues, gasket data, torque values, compression testing, replication, importance of thrust washers, and inspection criteria to apply. Technical discussion is intense so far as the cylinder head, block, pistons, rings & bearings are concerned. An in-depth study is presented of the governor and its many LH bearing housings along with methods of dealing with fan drive gear and pinion backlash and heel adjustments & measurements. Fan shaft disassembly and overhaul is also addressed briefly. A late major section addresses the clutch as a system to include general operation, disassembly and special inspection points. The chapter closes with the essence of an engine's restoration -- the "engine run up -- all systems check".

Chapter 4 - Transmission, Final Drive & PTO -- This chapter opens with an overview of the JD "H" drive train, from crankshaft, through the clutch & transmission, to the final drive. The concept of a reduction gear & sliding shaft -- typical in JD drive trains, is explained. The text includes a process plan style approach (step-by-step) to rebuilding your tractor's transmission -- too often omitted from most technical manuals. Much effort was included to assist the reader in

tear down, overhaul and reinstallation of the rear axle assemblies where the tractor's braking system presents many with special challenges. The chapter also examines renewal of the rear main case oil seals, total overhaul of the gear shifter (typically in a shambles on 60+ year old tractors), and a series of tips dealing with the JD "H" power shaft -- very tricky here!

Chapter 5 - Steering and Front Ends -- This chapter differs in style from the others. It opens with some neat techniques for steering wheel restoration, defines basic steering criteria, explores the usual causes of loose steering and suggests remedies available to the restorer. Once past the general area of discussion, this text uses three sections to deal with "H", "HN" and "HNH" systems in process plan style, four sections to address "HWH" tractors, followed by two sections applicable to all variations dealing with front wheel and hubs, and finally steering mechanism adjustments. As usual, several tips are provided to guide the reader along the way.

Chapter 6 -- Basic Tractor -- This chapter comes in to address a series of subject areas not neatly collectable into "sections" of a tractor to include rear wheel removal and restoration, some notes on tires, a history of the pan seat used on JD "H" tractors along with variations over the years. Discussion of the seat also includes tips on making your old cracked and beat up seat serviceable again. Drawbars -- here is another history lesson along with encouragement to be creative in making repairs -- from lessons learned. Work arounds are encouraged along with making a journal entry of the path chosen & why. Full inspection of the main case includes examination of the PTO bearing boss and drawbar mounting holes. Techniques of repair are discussed. Full description and operation of the JD "H" hydraulic lift system comes in this chapter along with basic guidance for overhaul. A collection of "Operating Tips" and "Frequently Asked Questions" round out the text portion of this chapter, and are followed by three summary pages which list the JD "H" specs, various equipments for the "H", and a partial list of special fasteners -- those with JD Part Numbers assigned. The list of special fasteners includes a narrative description of each.

Chapter 7 -- The Electrical System -- This chapter opens with a listing of original equipment installed on your "H", a major section dealing with generators, starters and lighting systems -- how they operate and how to troubleshoot them. Also included are a wiring diagram and a wire run list for the "H". Magneto discussion has been expanded to provide insight into how one works & magneto timing -- along with how to troubleshoot a magneto-based ignition system.

Chapter 8 - Carburetors -- This is a brief chapter starting with a complete narration telling you how the DLTX-26/46 carburetor works -- defining the two separate "circuits" for idle and load fuel. Diagnosing tractor failures involving the carburetor are explored to include some simple no-wrench tests you can perform. A series of complaints by John Deere tractor owners is listed along with responses. This is all followed up by a brief, concise two-page overhaul procedure. The chapter ends with a tip from John Deere that may help owners with a hard-starting tractor.

Chapter 9 - Paint and Painting -- This chapter combines the author's experience along with tales from others plus some theory and technology. A wide range of coatings is discussed to include aerosol canned paint, primers, "rust converters" and filler primers. Paint hardeners and the profound health issues they bring to bear are presented. Painting equipment includes safety devices to be used when using two & three-part paint solutions. Automotive type paints are

compared to paints obtained from your John Deere Dealer, along with what it takes to make the JD paint have the deep shine; that "wet look". John Deere factory painting methods are briefly discussed, and compared with those for "show tractor" painting. The chapter winds down with some neat additions for your tractor, in both narrative and pictorial form. At the very end of the chapter you will find some interesting letters between the author and others in quest of paint problem solutions over the years.

The Appendices and Subject Index

There are a dozen appendices taking up 35 pages following the nine basic chapters, some of which are reference data and some more laden with instructional content. Their titles generally reveal both content and purpose. They are: performance criteria references, standard torque values, a short vendor listing, gasket data for the "H", renew crankshaft and main bearings plus cam gear backlash, engine and clutch build up, inspection criteria in general, the 1939 "H" tractor, a sample journal page, how to paint a JD "H", adding a PTO to a non-PTO tractor, and rear wheel removal. Those dealing with the engine are in process plan format complete with torque values and quality control inspection points.

The subject index contains just over 600 line items making this book very well cross-referenced. Some subject items are listed and referenced using more than one of its common names so that finding the data you are seeking should not be difficult.