

COCC Technical Articles Summary

The Safety Zone - Trailer Safety, Loading (Issue 3, 2006)

Lubrication Charts (Issue 4, 2006)

Molasses Rust Removal (Issue 4, 2006)

Technical Seminar - HG-62 Final Drive removal, HG Steering Bands, FDE Track Rollers (Issue 1, 2007)

Photo Organization on your Computer (Issue 1, 2007)

Technical Seminar - HG/OC3 Final Drives (Issue 2, 2007)

HG Steering Bands (Issue 3, 2007)

Technical Seminar - Cletrac E62 Undercarriage (Issue 1, 2008)

Carburetor Float Repair (Issue 2, 2008)

The Safety Zone: Tire Date Codes, Trailers and Towing, and Knowing Your Equipment (Issue 1, 2009)

Technical Seminar - Track Roller Repair (Issue 1, 2009)

I Can't Believe I Did This (AD Injector Pump orientation) (Issue 2, 2009)

Oil for Old Engines & Tractors and ZDDP (Issue 3, 2009)

Valve Adjustment Tip (Issue 3, 2009)

Valve Springs (Issue 3, 2009)

Belting Pointers (Issue 3, 2009)

Trailer Towing (Issue 3, 2009)

Parts of a Plow (Issue 3, 2009)

Chart of Changes and Updates to the HG During its Production Lifetime (Issue 3, 2009)

Technical Seminar - Cletrac AG and 20K (Issue 4, 2009)

Failure Analysis on Cletrac Cooling System (Issue 4, 2009)

Battery Chargers (Issue 4, 2009)

Spark Plugs and Their Operation (Issue 4, 2009)

Technical Seminar - Cletrac BD Governor/Injection Pump Overhaul (Issue 1, 2010)

ZDDP Revisited (Issue 1, 2010)

Hercules Engine Intake & Exhaust Manifold Cracks (Issue 1, 2010)

Multiple Definitions of Horsepower (Issue 1, 2010)

When to Replace Your Rings (Issue 1, 2010)

Batteries (Issue 2, 2010)
Babbitt Bearing Material (Issue 2, 2010)
Making Gaskets (Issue 2, 2010)
Thread Coatings, Sealers & Lockers (Issue 2, 2010)
Making Your Own Engine Cleaning Solution (Issue 2, 2010)
Bolt Dynamics, Types, & Torque Values (including Torque Chart) (Issue 2, 2010)

Simple Fixes Can Avoid Spending Money (Issue 3, 2010)
Removing a Head and Working on a Stuck Engine (Issue 3, 2010)
Early History of Cletrac Corp from the Beginning to the 1930's (Issue 3, 2010)
Maintenance Items on a Cletrac AG6 (Thermostat and Battery Cables) (Issue 3, 2010)

Removing Dents from a Gas Tank (Issue 4, 2010)
Welding Seminar Wrap-up (Issue 4, 2010)
Motor Oil Formulation Types (Issue 4, 2010)
New Uses for Old Spark Plugs (Issue 4, 2010)
Installing Magnets on Oil Drain Plugs to Trap Metal Filings (Issue 4, 2010)

Technical Seminar: Parts 1 and 2 on Repair and Replacement of Cletrac AG6 Dead Axle & Bushings (Issue 1, 2011)
Calculating Pulley Diameter and Shaft RPM - Chart (Issue 1, 2011)

Disassembly, Diagnosis, and Repair of a Transmission Oil Pump on a Cletrac AG6 (Issue 2, 2011)
Gasket Tips (Issue 2, 2011)
"The Right Stuff" gasket sealer (Issue 2, 2011)
The Teagle Magneto (Issue 2, 2011)
Making Magneto Magnets Easy To Remove for Quick Refreshing (Issue 2, 2011)
More on Magneto Magnets (Issue 2, 2011)

Web Searching - Use the Mash (Issue 3, 2011)
Trailer Topics, including tow vehicles, tires, wheel bearings, axles, brakes, hitch, lights (Issue 3, 2011)
Timing of the High Tension Magneto (Issue 3, 2011)
Comparing the Turning Radius of Two Tractors (Issue 3, 2011)
Steering Band Replacement and More on a Cletrac AG6 (Issue 3, 2011)
Changes and Updates to the HG During its Production (Issue 3, 2011)
Variations of the HG (Issue 3, 2011)

Adjusting Your Side-View Mirrors (Issue 4, 2011)
A Source for Premium Leather Flat Belts (Issue 4, 2011)
Replacing the Seat, Seat-back, and Arm Rests on a Cletrac AG6 (Issue 4, 2011)
Reviews of Three Battery Charger / Maintainer Products (Issue 4, 2011)
A Drill Guide for Snapped Bolts (Issue 4, 2011)

Fire Extinguisher Ratings and Maintenance (Issue 1, 2012)
A Home Brew Recipe for Stuck Bolts, Pistons, and More (Issue 1, 2012)
Overhaul of HG / OC3 Final Drives (Issue 1, 2012)

Troubleshooting With a Vacuum Gauge (Issue 2, 2012)
Disintegrating Fan Belts (Issue 2, 2012)
Stuck Nut Removal (Issue 2, 2012)
Grease Cups (Issue 2, 2012)

AG4 and HG 3-point Hitch Additions (Issue 3, 2012)
Using Dry Ice During Engine Repairs (Issue 3, 2012)
AG6 Meter Console and Gas Tank Repair/Removal (Issue 3, 2012)
Cleveland H Radiator Repairs (Issue 3, 2012)
Making Gaskets (Issue 3, 2012)

Troubleshooting With A Spark Tester (Issue 4, 2012)
Track Pin Removal Tools (Issue 4, 2012)
Paint & Body Preparation (Issue 4, 2012)

Specialized Wrench for AD/BD Starter Motor Bottom Bolts (Issue 1, 2013)
Modified Standalone Compression Gauge (Issue 1, 2013)
Modified Chain-of-Pearls Model F Water Pump Packing Nut Wrench (Issue 1, 2013)
Automated Machine for Roller Repairs (Issue 1, 2013)
How To Measure PH Levels In The Cooling System (Issue 1, 2013)
Substituting a Hercules DOOD Head Gasket on a DOOC Engine (Issue 1, 2013)
Repair & Repaint (Issue 1, 2013)

Tie Down Chains & Chain Hooks (Issue 2, 2013)
Steering Band Adjustment Wrench (Issue 2, 2013)
Hitch Line-up Tool (Issue 2, 2013)
Shift Pattern Labeling (Issue 2, 2013)
Radiator Fluid (Issue 2, 2013)
Magnetto Points (Issue 2, 2013)
Chain-of-Pearls Model F Water Pump Repairs (Issue 2, 2013)
Chain-of-Pearls Model F Timing Adjustments (Issue 2, 2013)
OC-18 Clutch Repairs (Issue 2, 2013)

Laminated Veneer Lumber for your Tractor Trailer (Issue 3, 2013)
The Tool Corner - Radiator Lifter (Issue 3, 2013)
The Tool Corner - An Old Timer's Trick for Fixing Fouled Plugs (Issue 3, 2013)
The Tool Corner - Spark Plug Wire Connector Installer (Issue 3, 2013)
The Tool Corner - Air Suction Line (Issue 3, 2013)
Re-Installing Steering Bands in only Eight and a Half Hours (Issue 3, 2013)
Non-Invasive Engine Diagnosis and Repair (Issue 3, 2013)
Negative Effects of Using Ethanol-Based Fuels (Issue 3, 2013)
How To Adjust Your Carburetor Using Ethanol-Based Fuels (Issue 3, 2013)
Overhaul of a Cletrac AG6 Tillotson P-2A Carburetor (Issue 3, 2013)
Chain-of-Pearls F Belt Pulley Bearing Repairs (Issue 3, 2013)
Chain-of-Pearls F Water Air Clarifier Modernization (Issue 3, 2013)

The Tool Corner - Track Shoe Clamp (Issue 4, 2013)
Weld Repair of 1918 Cleveland Model H Track Rails (Issue 4, 2013)
Personal Experience with ATF/Acetone Mix as a Rust Penetrant (Issue 4, 2013)
An Apparent Weak Spot on the Cletrac 20K Engine Block (Issue 4, 2013)

A Home-Made Idler Shaft Bracket Puller for the R (Issue 4, 2013)
Diesel Fuel Injector Testing (Issue 1, 2014)
Cleaning and Re-using Caulk Gun Tips (Issue 1, 2014)
Article Preservation (Issue 1, 2014)
Grease Versus Oil on Track Rollers (Issue 1, 2014)

Technical Seminar Notes (Issue 1, 2015)
Differential Assembly Carrier Sling (Issue 1, 2015)
Preparing Shift Lever Boots (Issue 1, 2015)
Pickup Truck Modifications Focusing on Winch Power and Camera Additions (Issue 1, 2015)

Lynch Pins (Issue 2, 2015)
Restoration Supplies and Tools (Issue 2, 2015)
Chain Binder Modification to Add Locking Pins (Issue 2, 2015)
Comparison of Engine Displacements Between Hercules AG5 Hercules 00C Engine and AG6 Continental Engine (Issue 2, 2015)
Extracting LARGE Broken Bolts (Issue 2, 2015)
Hercules Engine Crankshaft Seal Replacement (Issue 2, 2015)
Crawler Street Track Pads (Part 1) (Issue 2, 2015)

Slide Hammer Clamp (Issue 3, 2015)
Re-Using a Fuel Additive Container (Issue 3, 2015)
One-Mount Trailer Ball Hitch, Alignment Guide, and other Accessories (Issue 3, 2015)
Checking out the Generator and Voltage Regulator on an AG6 (Issue 3, 2015)
Final Drive Woes (Issue 3, 2015)
Crawler Track Street Pads (Part 2) (Issue 3, 2015)

Dixie's Cletrac Beans (Issue 4, 2015)
Using a Hacksaw Blade as a Convenient Fuel Level Monitor (Issue 4, 2015)
Diagnosing a No-Start on a Diesel Tractor (Issue 4, 2015)
Technical Seminar - Re-installation of Clutch and Engine on a Cletrac AD (Issue 4, 2015)

The Forsaken Tractor Trailer (Issue 1, 2016)
Cleaning Piston Ring Grooves (Issue 1, 2016)
Torch Welding Cast Iron With Old Piston Rings, Part 1 (Issue 1, 2016)
Removal of Clutch and Brake Assembly on a Cletrac AD to Replace Front Transmission Seal, then Re-installation of Clutch Coupling and Brake Prior to Installation of Hercules DOOC Engine (Issue 1, 2016)
My DDH Acquisition, Fixing a No-start Issue, Proper Use of Ether and More (Issue 1, 2016)
An Investigation into Propel High Performance (HPR) Diesel Fuel, Cetane Ratings, and More (Issue 1, 2016)

Tips on Removing Thick Paint (Issue 2, 2016)
Replacing Tires on a Wheel Tractor (Issue 2, 2016)
Renewing Defective Gaskets (Issue 2, 2016)
Understanding Breaker Point Ignition Systems (Issue 2, 2016)

Controlled Differential Steering (As Explained in a 1937 Cletrac Model CG - DF - DD Brochure) (Issue 2, 2016)
Oliver DDH Assessment, Minor Repairs and More (Solar Panel Installation) (Issue 2, 2016)

A Timely Hint (DOO Injection Pumps) (Issue 3, 2016)
How to Stop High Pressure Leaks on Diesel Injector Fittings on Bosch APE Pumps (Issue 3, 2016)
Tractor Belt Speed / Tractor Testing Code (Issue 3, 2016)
Chart: Hercules Engines, 3 to 500 HP (Issue 3, 2016)
Chart: Continental Industrial Gasoline and Diesel Engines (Issue 3, 2016)
Standards for Agricultural Tractors and Machines: Power Take-Off and Drawbar Hitch Locations (Issue 3, 2016)
Spark Plug Heat Ranges (Issue 3, 2016)
Some More Info on the Cletrac Differential Steering Demonstrator (Issue 3, 2016)
The Tool Corner: Square Nuts - How to Measure Them for an Eight-Point Socket (Issue 3, 2016)

Product Review: "Battery Saver" Digital Battery Tester / Analyzer (Issue 4, 2016)
Twin Disc Clutch Pulley for the Cletrac Model H and W (Issue 4, 2016)
Junkyard Wars, Visalia Edition (Ceiling Fan) (Issue 4, 2016)
Technical Seminar: Evaluating a Tractor in the Field (Issue 4, 2016)

The Tool Corner: LockNLube Grease Coupler (Issue 1, 2017)
The Tool Corner: Extended Cletrac Exhaust Pipe (Issue 1, 2017)
The Tool Corner: HD Pocket BoreScope (Issue 1, 2017)
Carco Winch Information (Issue 1, 2017)
Restoration of a Cletrac 20C (Issue 1, 2017)
Tip of the Day: The Difference Between an Ammeter Gauge and an Amperage Gauge (Issue 1, 2017)
Tip of the Day: 50 Years of Paint and Grease (Issue 1, 2017)
Tip of the Day: Save That Seal (Issue 1, 2017)
Bearings to fit Cleveland Tractors (Issue 1, 2017)
Brake Lining Listings (Issue 1, 2017)

Trailer Safety (Issue 2, 2017)
The Tool Corner: LockNLube Grease Coupler Re-visited (Issue 2, 2017)
¼" Brass Needle Valve Makes a Great Fuel Shutoff Valve on all my Cletracs (Issue 2, 2017)
Copper Versus Steel Fuel Lines on a Diesel Tractor (Issue 2, 2017)
Cletrac EN Paint Colors (Issue 2, 2017)
Cylinder Head Reconditioning On Hercules DJX Engine in a BD Cletrac (Issue 2, 2017)
Reading Your Diesel Engine's Smoke Signals (Issue 2, 2017)
Don't Pressure Wash Your Diesel Engine Right After Use (Issue 2, 2017)
Damaged Umbrella Seals on Injection Pump Shaft Cause Fuel Leakage into the Crankcase (Issue 2, 2017)

Over-Restoring With Acrylic Urethane (Issue 3, 2017)
Tire Pressure Monitor Product Review (Issue 3, 2017)
Special Fasteners (Issue 3, 2017)

Early HG Tractors (Issue 3, 2017)
Changes and Updates of the HG During It's Production (Issue 3, 2017)
Authenticity or Efficiency - Let's Get Down to the Nuts & Bolts of This (Issue 3, 2017)

Trailer Tires (Issue 4, 2017)
The Tool Corner: Pressure Washing (Issue 4, 2017)
Technical Seminar: Carburetor Repairs, 20C Rollers, DDH Repairs (Issue 4, 2017)
Manufacturing a Temporary Engine Mount for Safety (Issue 4, 2017)

Tire Safety, Date Codes and more (Issue 1, 2018)
Solvents (Issue 1, 2018)
The Tool Corner - Battery Saver Model 2365-LCD Vehicle Battery Pulse Charger / Maintainer / Tester / Battery Plate Cleaner (Issue 1, 2018)
Carburetor Repairs on an AG6 (Issue 1, 2018)
Annealing Copper Crush Washers to Re-Use Them (Issue 1, 2018)
Explanation and Diagnosis of Rich Versus Lean Carburation (Issue 1, 2018)

Vendor Review: The Carburetor Shop (Issue 2, 2018)
Product Review: Harbor Freight Viking Battery Pulse Charger / Maintainers (Issue 2, 2018)
Compression Testers versus Leak-Down Testers (Issue 2, 2018)
Freeing up Stuck Lug Nuts (Issue 2, 2018)
DDH work (Issue 2, 2018)
Freeing up Stuck Pistons (Issue 2, 2018)
Anatomy and Operating Principles of a Diesel Injector (Issue 2, 2018)
Conversion of a Cletrac DD Diesel Injector to a Diesel Cylinder Compression Tester (Issue 2, 2018)

The Safety Zone: Situational Awareness (Issue 3, 2018)
OEM: Wico, including Magneto Selector (Issue 3, 2018)
Manufacturing a Sprocket Puller (Issue 3, 2018)
Manufacturing a Sprocket Nut Wrench (Issue 3, 2018)
Product Review: Continuation of Harbor Freight Viking Battery Pulse Charger / Maintainers (Issue 3, 2018)
Battery Charger Limits (Issue 3, 2018)
Restoring 2 4-Wheel Drive Fork Lifts (Issue 3, 2018)
Bright's Nursery trip (Issue 3, 2018)

Technical Seminar - Removal of Sprockets and Tracks on Cletrac DDH (Issue 4, 2018)
Water Pump Repairs and Testing (Issue 4, 2018)
Linden High School 20C Restoration - Wheels and Shafts (Issue 4, 2018)
Differential Drum Repair (Issue 4, 2018)

Technical Article: Replacing Plug Wiring and Coil on a
Cletrac AG6 (Issue 1, 2019)

Technical Seminar - Final Drive Rebuilds on a Cletrac DDH

Logging Tractor (Issue 2, 2019)
The Safety Zone - Never Saddle A Dead Horse (how to properly bind a cable
(Issue 2, 2019)
Cletrac 15 Babbit Bearing Repairs (Issue 2, 2019)

The Tool Corner - Harbor Freight Portable Electric Wrench (Issue 1, 2020)
Safety Corner - Binders and Chains (Issue 1, 2020)
Big Jim Forklift Restoration (Issue 1, 2020)

Technical Corner - Modification to Carburetor Air Intake Line
for Starter Fluid Insertion (Issue 2, 2020)
Updating a Vortox Oil-Bath Air Cleaner to a Modern
Replaceable Cotton Gauze Filter (Issue 2, 2020)
Big Jim: Fourth Installment of Fork-Lift Restore (Issue 2, 2020)
Addressing a Common Pest Problem (Issue 2, 2020)

Descriptive Drawings of Engine Cylinder Wear (Issue 1, 2021)
Polarizing a Generator, and Proper Tractor Shutoff Procedure (Issue 1, 2021)
Chain Towing Safety, the Concept of Kinetic Energy Towing, and a Yankum
Ropes Review (Issue 1, 2021)
Rear Track Sprockets on Crawler Tractors "ALWAYS" Seem to Leak (Issue 1,
2021)

Wear Points on Upper & Lower Track Rollers and the Dead Axle, and Repairs to
Both (Issue 1, 2022)

How to Build a Magneto Magnet Charger for Under \$100 (Issue 1, 2023)
Keep Up Your Battery Electrolyte Levels (Issue 1, 2023)
Winterization Tips (Issue 1, 2023)
OCC Hercules Oil Filter (Issue 1, 2023)
Track Bolts, Nuts, and Lock Washers are Always Problematic (Issue 1, 2023)

Bringing an Old and New Lip Seal Back to Life (Issue 1, 2024)
My Cletrac Caught Fire! (Issue 1, 2024)

Restoring a Derelict Cletrac Model F (Issue 1, 2025)
My Cletrac Almost Killed Me! (Issue 1, 2025)