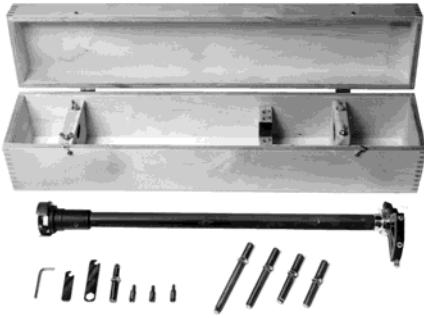


T10300

### Liner Bore Gage - 9.000 Inch Diameter - For GE FDL Engines



This tool is used to measure the inside diameter of the cylinder liner. The gage set comes with sufficient mandrels to measure from 6" to 12 1/8" diameter. The long shank allows for readings to be taken along the whole length of the GE liner. This tool should be used with T10310 Gage and micrometer standard to establish the exact 9.000" reference diameter. The liner bore gauge measures bores with an accuracy of .0001".

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T13221

### Cylinder Hold Down Bolt Insert Wrench 3/4" Square Drive - for GE FDL Engines



Two models of cylinder bolt insert wrenches are available for GE Engines: the T13221 and the T13222. The T13221 is equipped with a 3/4" female drive and a brass pilot. This wrench is intended for torquing and removal of inserts. The T13222 wrench is equipped with a 1/2" square female drive and is intended to be used with an impact wrench to strip engines.

---

T13222

### Cylinder Hold Down Bolt Insert Wrench - 1/2" Square Drive - GE FDL Engines



Two models of cylinder bolt insert wrenches are available for GE Engines: the T13221 and the T13222. The T13221 is equipped with a 3/4" female drive and a brass pilot. This wrench is intended for torquing and removal of inserts. The T13222 wrench is equipped with a 1/2" square female drive and is intended to be used with an impact wrench to strip engines.

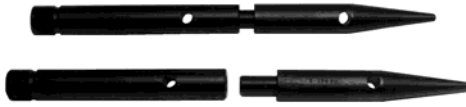
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T13670

Power Assembly Guide Pin for GE FDL Engines

These pins aid positioning power assemblies onto the main frame by guiding the cylinder locating boss into the main frame.

These pins are sold individually. Each pin features a two piece design as shown below.



T13683

Compression Tester - Individual Tester for GE FDL Engines



Compression Testers

Presently over 20000 of these testers are in service around the world and represent an outstanding product. Through their use, customers can very quickly determine faulty cylinders. They have virtually eliminated earlier blow-by test procedures. Complete instructions are included.

Individual Testers

- T13683 Compression Tester - GE
- T50213 Compression Tester - EMD
- T50023 Compression Tester - ALCO

- 1 [T50121](#) Gauge
- 2 [T50330](#) Tee
- 3 [T50341](#) Nipple
- 4 [T50142](#) Release Valve
- 5 [T50131](#) Check Valve
- 6 [T50192](#) Filter
- 7 [T50171](#) Socket
- 8 [T50181](#) Plug
- 9 [T50160](#) EMD Adapter - complete w/plug
- 10 [T50420](#) GE Adapter - complete w/plug
- 11 [T50010](#) ALCO Adapter - complete w/plug
- 12 [T50960](#) Governor Stop Block
- 13 [T22711](#) Storage Box

T15681

Pneumatic Torque Wrench Kit for Power Assembly Mounting Bolts - GE FDL Engines



- 1 [T16050](#) 2500 lb. Ft. Air Drive Torque Motor
- 2 [T50041](#) Air Control Kit complete with cage
- 3 [T15971](#) Reaction Fixture
- 4 [T15980](#) T15980 Extension
- 5 [T15990](#) T15990 Universal Joint
- 6 [T16001](#) T16001 Socket
- 7 [T16500](#) 5:1 Torque Verifier

T15971

Reaction Fixture for Cylinder Bolt Torquing and Removal - GE FDL Engines



T16031

0-160 PSI Gauge for Air Control Kits



T16050

Torque Motor, 2500 FT-LBS, 1" Drive, For GE FDL Engines



Shown Here as Item #1 in T24101 Cylinder Hold Down Bolt Torque Kit. Also used in T15681 Kit

T16051

Air Motor for GE and EMD Cylinder Hold Down Bolts, EMD Crab Nut Bolts (1 1/2" Square Drive)



T16065

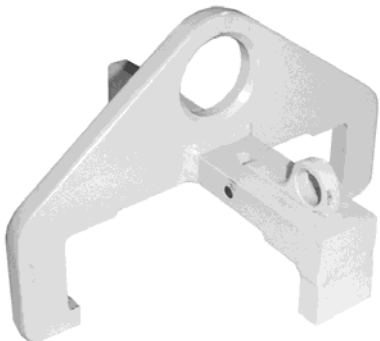
Power Assembly Lifter-rear mount - for GE FDL Engines



This lifter is mounted on the rear of the cylinder by two T13791 1/2"-13 Grade 8 bolts at the water outlet boss. Vertical and 22 1/2 degree pick up points are provided.

T16461

Cylinder Liner Lifter for GE FDL Engines



This lifter snaps and locks onto a cylinder liner for lifting purposes. It retains the diameter on three sides and is secured using the "cam" lock. It is most handy during cylinder assembly work.

T16500

5:1 Torque Verifier



T16711

Hydraulic Cylinder Liner Remover - 115 volt - For GE FDL Engines

This tool is used to hydraulically remove cylinder liners from cylinder jackets. The top portion of the fixture swivels out of the way easing the loading and removal of the cylinder assembly. A T16711 designates a 115 Volt Cylinder Liner Remover, while a T16712 is 230 Volts.



- 1 [T14320](#) Motor Driven Pump 115 Volt
- [T14330](#) Motor Driven Pump 230 Volt
- 2 [T10200](#) Hose
- 3 [T16710](#) Puller Complete with Ram

T16712

Hydraulic Cylinder Liner Remover - 230 volt - For GE FDL Engines

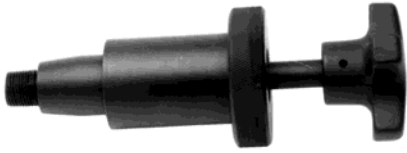
This tool is used to hydraulically remove cylinder liners from cylinder jackets. The top portion of the fixture swivels out of the way easing the loading and removal of the cylinder assembly. A T16711 designates a 115 Volt Cylinder Liner Remover, while a T16712 is 230 Volts.



- 1 [T14320](#) Motor Driven Pump 115 Volt
- [T14330](#) Motor Driven Pump 230 Volt
- 2 [T10200](#) Hose
- 3 [T16710](#) Puller Complete with Ram

T16730

## Cylinder Head Alignment Tool for GE FDL Engines



This tool is useful for aligning cylinder heads in the jacket during the cylinder assembly process. It enters the compression relief plug hole and engages the mating hole in the head. The pipe thread end is screwed into the head and the follower screwed toward the head to perfectly line up the passage way. The follower should be backed off before the liner is pressed into the jacket, otherwise damage to the tool could result.

T16811

## #5 Spline Drive Impact Wrench for Cylinder Hold Down Bolt Removal Only- GE FDL Engines



T16842

## Cylinder Hold Down Bolt Impact Wrench Set (without air control kit)- GE FDL Engines - For Removal Only



The following kits provide the most rapid removal of cylinder hold-down bolts on GE engines (4 bolts per cylinder). Used for removal only. The T16843 kit provides an air control kit with a filter regulator and oiler assembly which greatly enhances the useful life of the wrench. Maximum shop air pressure should be used to remove the bolts.

- 1 [T16811](#) #5 Spline Drive Impact Wrench
- 2 [T16830](#) Extension
- 3 [T16820](#) Socket
- 4 [T16040](#) Hose
- 5 [T21950](#) Oiler

T16843

### Cylinder Hold Down Bolt Impact Wrench Set (with air control kit)- GE FDL Engines - For Removal Only

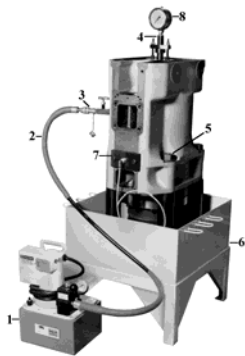


The following kits provide the most rapid removal of cylinder hold-down bolts on GE engines (4 bolts per cylinder). Used for removal only. The T16843 kit provides an air control kit with a filter regulator and oiler assembly which greatly enhances the useful life of the wrench. Maximum shop air pressure should be used to remove the bolts.

- 1 [T16811](#) #5 Spline Drive Impact Wrench
- 2 [T16830](#) Extension
- 3 [T16820](#) Socket
- 4 [T50041](#) Air Control Kit

T17380

### 5000 PSI Hydraulic Cylinder Leak Test Fixture - 115 V - for GE FDL Engines

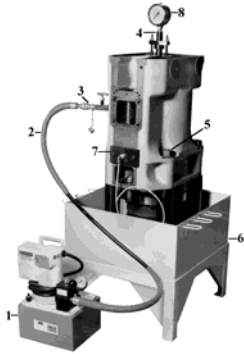


This fixture is supplied with all the hardware, hydraulic pump and necessary accessories to completely test rebuilt cylinders at 5000 PSI. Follow the GE instructions for exact details of the test. Please specify T17380 for a 115 Volt Test Fixture, or T17480 for a 230 Volt Fixture.

- 1 [T14320](#) Motor Driven Pump 115 Volt
- [T14330](#) Motor Driven Pump 230 Volt
- 2 [T10200](#) Hose
- 3 [T17590](#) Valve and Plug Adapter
- 4 [T17580](#) Gauge and Dummy Injector Assembly
- 5 [T50230](#) Hold Down Bolt and Washer (4 required)
- [T17660](#) "O" Ring for Piston (6 required)
- [T19350](#) 45 degree Test Valve (2 supplied)
- [T19360](#) 15 degree Test Valve (2 supplied)
- [T21730](#) "O" Ring for test valves (12 supplied)
- 6 [T17490](#) Stand
- 7 [T17500](#) Test Fixture
- 8 [T17700](#) Gage only 0-10,000 PSI
- 9 [T50240](#) Set of Blanking Plates - 1 water inlet and 1 water outlet

T17480

## 5000 PSI Hydraulic Cylinder Leak Test Fixture - 230 V - for GE FDL Engines



This fixture is supplied with all the hardware, hydraulic pump and necessary accessories to completely test rebuilt cylinders at 5000 PSI. Follow the GE instructions for exact details of the test. Please specify T17380 for a 115 Volt Test Fixture, or T17480 for a 230 Volt Fixture.

- 
- 1 [T14320](#) Motor Driven Pump 115 Volt
  - [T14330](#) Motor Driven Pump 230 Volt
  - 2 [T10200](#) Hose
  - 3 [T17590](#) Valve and Plug Adapter
  - 4 [T17580](#) Gauge and Dummy Injector Assembly
  - 5 [T50230](#) Hold Down Bolt and Washer (4 required)
  - [T17660](#) "O" Ring for Piston (6 required)
  - [T19350](#) 45 degree Test Valve (2 supplied)
  - [T19360](#) 15 degree Test Valve (2 supplied)
  - [T21730](#) "O" Ring for test valves (12 supplied)
  - 6 [T17490](#) Stand
  - 7 [T17500](#) Test Fixture
  - 8 [T17700](#) Gage only 0-10,000 PSI
  - 9 [T50240](#) Set of Blanking Plates - 1 water inlet and 1 water outlet

T18300

## Magnetic Base Drill Kit - Drilling and Re-tapping Main Frame Cylinder Hold Down Bolt Threads - GE FDL



The magnetic base drill is used to re-drill and tap the engine main frame when cylinder hold down bolts strip. A plate with hardened liners fits into the cylinder assembly hole in the main frame. Two special hold down bolts are then inserted through the matching hardened bushings adjacent to the stripped hole, and tightened. The magnetic base drill fits on the plate over the hole to be drilled and is secured by the electromagnet. The drill can be precisely centered by the use of the swivel base on the drill stand, without removing power from the magnetic base. In this manner, the drill can be guided into the precision bushing.

The T18400 230V Drill is no longer available as a stand alone unit, however, we now offer a T18400T transformer that will connect with 230 Volts and transform to 115 V. These are available in 50 or 60 Hz configurations, and will allow the T18300 to work in locations that only supply 230 Volt power.

Warning: secure power line to power outlet so the circuit cannot be interrupted. If power to the magnetic base is interrupted, the drill could fail and cause personal injury. The drill stand is equipped with a two speed motor (250/500 RPM). It is suggested that the 250 RPM be used for drilling. A special tool is furnished to countersink the hole to the correct diameter. A tap and tap holder can be used with the drill motor to start the threads in the hole.

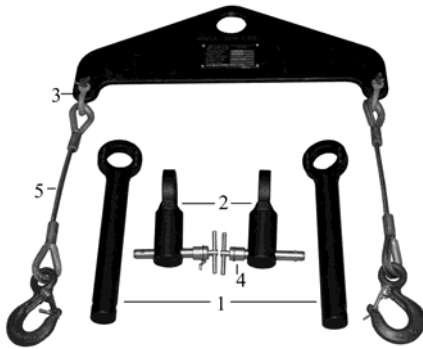
Caution: DO NOT engage drill feed. Final tap by manual means when nearing the bottom of hole. The magnetic base drill set accomplishes the precise job of drilling and tapping the holes for application of the hardened insert.

Note: A complete set of instructions is furnished with each magnetic base drill set.

- 
- 1 [T18290](#) 115 Volt Drill Stand
  - 1 [T18400T](#) Transformer - 230V to 115V
  - 2 [T18360](#) Guide Plate with Hardened Fasteners
  - 3 [T18420](#) 1 1/4" Cylinder Bolt Bushings (2 required)
  - 4 [T18430](#) 1 35/64" Bushing
  - 5 [T18370](#) 2 1/16" Bushing
  - 6 [T18340](#) Tap Holder
  - 7 [T18330](#) 1 5/8"-12 Special Tap
  - 8 [T18380](#) 2 1/8"-16 Special Tap
  - 9 [T18350](#) Counterbore Extension
  - 10 [T18310](#) 1 11/16" Special Counterbore with Pilot
  - 11 [T18320](#) 1 35/64" Drill
  - 12 [T18390](#) 2 1/16" Drill
  - 13 [T18441](#) Guide Plate Hold Down Bolts (2 required)
  - 14 [T18450](#) 2 1/8"-16 Repair Plug (6 supplied)
  - 15 [T50390](#) 1 5/8"-12 Insert (6 supplied)
  - 16 [N405P19](#) Lockwashers (6 supplied)
  - 17 [T13221](#) Insert Wrench

T18703

Cylinder Jacket Lifter for GE FDL Engines

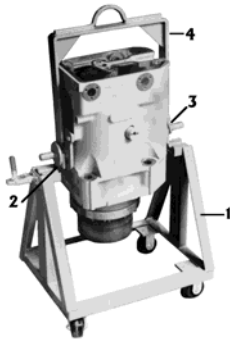


This tool is used in backshops where handling the cylinder jacket requires a quick method of hookup and release. The two short pins allow upright jacket pickup through the rocker shaft holes and the two long pins allow for inverted cylinder jacket pickup through the cylinder mounting holes.

- 1 [T18691](#) Lifting Pins (Long) 2 required
- 2 [T18681](#) Lifting Pins (Short) 2 required
- 3 [T22311](#) Shackle - 2 required
- 4 [T22331](#) Quick Release Pins - 2 required
- 5 [T22651](#) Cable assembly w/spring loaded safety hooks (2 required)

T19280

Cylinder Assembly/Disassembly Service Fixture - GE FDL Engines



This fixture is used to aid assembly and disassembly of engine cylinders. Lifter pads are bolted to the inlet and exhaust ports of the cylinder to create rotation points for the cylinder. The pads establish a center of gravity for the cylinder and turning the cylinder requires a minimum of effort. A toggle clamp is provided to lock the cylinder in various service positions. A "C" frame lifter is also provided to facilitate loading and unloading the cylinder from the fixture.

- 1 [T19280](#) Cylinder Service Fixture
- 2 [T23071](#) Exhaust Lifter Pad
- 3 [T23061](#) Intake Lifter Pad
- 4 [T19321](#) Cylinder Lifter

T19922

**Power Assembly Lifter - Front Mount With Hydraulic "A" Frame For Repositioning - GE FDL Engines**

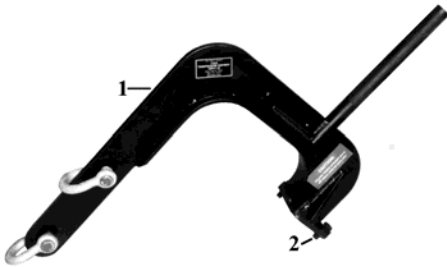


This lifter allows for the 22 1/2 degree (engine) and vertical cylinder pick up by repositioning the "A" Frame Assembly. This feature allows the machinist to pull a cylinder or power assembly from the engine (22 1/2) and reposition it to vertical without re-rigging lift points. This facilitates placing the used cylinder in a vertical mount shipping container. Cylinders or power assemblies can also be lifted from the shipping container and tilted 22 1/2 degrees to accommodate engine mounting. A hydraulic jack is used to reposition the "A" Frame.

Caution: When removing or installing cylinders on the engine, the forward pin must be installed to assure the maximum safety factor of the design. The jack is used to reposition the "A" Frame only, and the forward pin is used to carry the loads imposed by jockeying the cylinder or power assembly on or off the engine.

T19923

**Power Assembly Lifter - (Front Mount, 4 5/8"-11 Bolts) - for GE FDL Engines**



This lifter mounts on the air inlet boss of the cylinder with four 5/8"-11 high tensile captive cap screws. The T19923 provides for the 22 1/2 degree engine installation position as well as the vertical lift. 4 - T13800 5/8"-11 mounting bolts are required.

T20241

**Cylinder Head Lifter for GE FDL Engines**



This tool is used to lift cylinder heads during cylinder assembly. It is used with a hoist to lower the head into the cylinder jacket.

T21500

Cylinder Compression Relief Hole Air Valve Adapter for GE FDL Engines

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T22303

Compression Tester Set - Set of 8 Testers for GE FDL Engines

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T23600

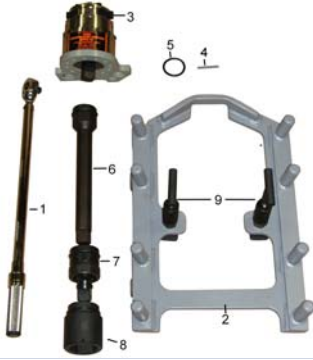
Torque Verifier (1/2" Sq. Drive Input, 1" Square Drive Output) For FDL Cylinder Hold Down Bolt Torque Verificaion

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T23610

## Manual Cylinder Hold Down Bolt Torque Kit for GE FDL Engines - (Uses T23600 Torque Verifier)



The T23610 torque kit provides a moderately priced, most accurate alternative to the T15681 Pneumatic torque controlled wrench for GE Cylinder Hold Down Bolts. The torque multiplier features a 1/2" square female input and a 1" square output. 56 lb.ft. input torque will result in 1400 lb.ft. required output torque. The torque multiplier is also equipped with an input ratcheting mechanism that eliminates drive line wrap-up, assuring maximum utilization of input motion and effort.

The torque verifier is certified to be torque accurate to +/- 3%. Repair and return service is available.

- 
- 1 [T22520](#) 1/2" drive ratcheting torque wrench (30-250 lb. Ft.)
  - 2 [T15971](#) Reaction Fixture w/T50830 HD Clamps
  - 3 [T23600](#) 25:1 Torque Multiplier
  - 4 [T13020](#) Locking Pin (3 required)
  - 5 [T13030](#) O-Ring (3 required)
  - 6 [T15980](#) Extension
  - 7 [T15990](#) Universal Joint
  - 8 [T16001](#) Socket
  - 9 [T50830](#) Heavy Duty Clamps

T24101

## Pneumatic Torque Wrench Kit for Cylinder Hold Down Bolt Torque Verification and Removal - GE FDL Engines



This kit enables all shops to precisely control cylinder bolt torquing. It is the most complete kit offered. The air pressure is set on the air control kit in accordance with the individual motor torque curve while the air motor is running unloaded. The proper air setting will produce 1350 lb.ft. cylinder bolt torque when the motor stalls during torquing. The 25:1 Verifier is used to audit the results and minor air pressure corrections may be needed.

- 
- 1 [T16050](#) 2500 lb. Ft. Air Drive Torque Motor
  - 2 [T50041](#) Air Control Kit complete with cage
  - 3 [T23600](#) 25:1 Torque Verifier w/anti wrap up feature
  - 4 [T23980](#) Cart
  - 5 [T15971](#) Reaction Fixture
  - 6 [T15980](#) Extension
  - 7 [T15990](#) Universal Joint
  - 8 [T16001](#) Socket
  - 9 [T22520](#) 30-250 lb. Ft. 1/2" drive ratcheting torque wrench

T50023

Compression Tester - Individual Tester for ALCO Engines



Compression Testers

Presently over 20000 of these testers are in service around the world and represent an outstanding product. Through their use, customers can very quickly determine faulty cylinders. They have virtually eliminated earlier blow-by test procedures. Complete instructions are included.

Individual Testers

- T13683 Compression Tester - GE
- T50213 Compression Tester - EMD
- T50023 Compression Tester - ALCO

T50071

Heavy Duty Kit for Removing Cylinder Hold Down Bolts - GE FDL Engines



Rated at 3200 lb. ft. Used mainly for stripping engines at overhaul.

- 1 [T16051](#) Torque Motor 1 1/2" sq. drive
- 2 [T15971](#) Reaction Fixture
- 3 [T50081](#) Extension 1 1/2" sq. drive
- 4 [T50090](#) Universal Joint 1 1/2" sq. drive
- 5 [T50101](#) 2" 6 point Socket 1 1/2" sq. drive
- 6 [T50041](#) Air Control Kit

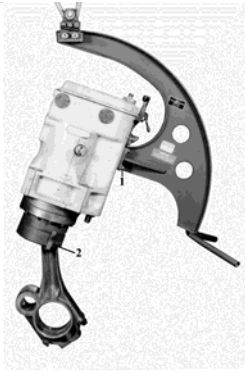
T50390

1-5/8"-12 Insert for GE FDL Cylinder Hold Down Bolt Threads



T54552

## Power Assembly Lifter - for GE FDL Engines



This lifter was developed to solve the problem of rigging a GE Power Assembly from the shipping position - (laying on the exhaust port side) to the 22 1/2 engine installation position. A 112 1/2 trolley is incorporated, allowing an operator easy repositioning of the power assembly. (See Photos)

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T54552C

## Cylinder Lifter - for GE FDL Engines



This lifter is used to install and remove a GE FDL cylinder from the main frame (Power assembly less piston and rod). It will slide along the center of gravity from a horizontal shipping position to the 22 1/2 degree installation position with minimal effort.

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T54762

## Welded Head and Liner Lifter and Rotator - GE FDL Engines



This lifter quickly clamps the body of the cylinder liner and locks in place. It is designed to allow rotation and positioning of this heavy assembly, easing handling in the rebuild and teardown areas.

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T54890

Horizontal Cylinder / Power Assembly Lifter for GE FDL Engines



This lifter was designed to raise GE cylinders and power assemblies horizontally. Cylinders are lifted by moving the slider toward the mounting pad stop. To lift power assemblies move slider toward handle.

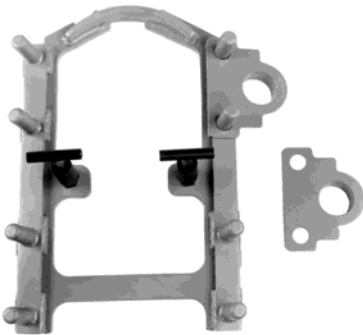
T55470

GE FDL Engine Cylinder Hold Down Bolt Spinner Wrench



T55670

Cylinder Hold Down Bolt Torque Centering Device - GE FDL Engines



This device is shown on the T15971 reaction fixture. Some machinists prefer to remove the extension, universal and socket from the air motor when performing power assembly bolt removal and installation. This device holds the input of the extension in place so as to aid the installation of the air motor into the extension.

T55701

Exhaust Manifold Ratchet Wrench - 5/8" for GE FDL Engines



T65070

## Power Assembly Stand for GE FDL Engines



This stand accommodates the installation or removal of individual Power Assembly Components outside of the engine. There is a machined ledge to catch the inside of the piston skirt and hold it in place and guide pins aid the cylinder onto the stand. Once the assembly is complete it can be picked up and moved with the T54552 Lifter (or T54552 if it's a short assembly). There is a tool rack for a T10892 Ring Compressor, T18593 Piston Lifter and T10992 Expander attached to the stand's frame.

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