



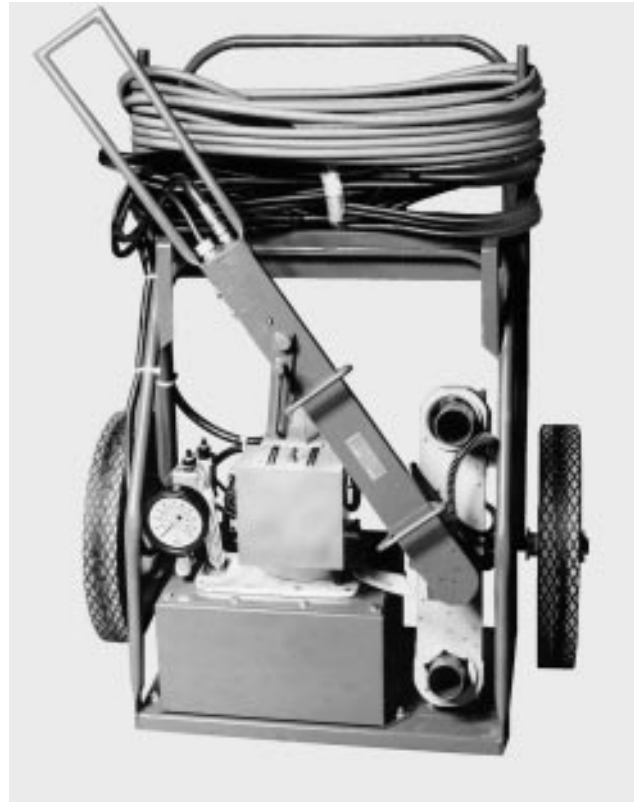
TRANSPORTATION EQUIPMENT SUPPLY CO.

## T19250 (115 Volt) Hydraulic Main Bearing T21060 (230 Volt) Wrench

The wrench fits into the engine inspection door and is turned to fit onto the nut to be loosened or tightened. The other end fits on the adjacent nut to take up the reaction of the wrench. A downward pressure should be applied to the handle to keep the socket engaged on the nut. At least two studs per 16 cylinder engine should be checked for proper stretch by using the T23091 Main Bearing Stud Stretch Gage. This wrench is equipped with dual controls for 16, 12 and 8 cylinder engines. Eight cylinder engines require less stud stretch.

This unit consists of a hydraulic wrench, 1 1/2 hp, 10,000 PSI, motorized hydraulic pump with pressure gauge, 25 feet hydraulic hose and control cable. It is mounted on a rubber tire cart for ease of mobility.

When using the TIGHTEN push-button, the hydraulic pressure is controlled by a pressure switch set to a predetermined pressure, thus giving the required stud stretch. The pressure setting to give the required stud stretch is preset at approximately 6200 PSI for 12 and 16 cylinder engines and 5775 PSI for 8 cylinder engines. The LOOSEN push-button bypasses the mentioned pressure switch, allowing more torque to be applied to the nut while loosening.



## T23094 Main Bearing Stud Stretch Gage

This gage incorporates four adjustments to cover the various length studs in service. A knurled nut is loosened and a slider mechanism is used to line up set marks for the individual stud being measured. The nut should then be tightened. The indicator gage reads upright via the rocker mechanism.

The indicator gage can be rotated 360 degrees and clamped at any position to accommodate the various stud locations on the engine. This unit comes complete with a storage box to ensure safe storage.



## T17420 Hydraulic Frame Spreader

1	T17830 Pump
2	T17840 Hose
3	T22810 Cylinder
4	T22820 Extension
5	T22830 Cap
6	T22840 Coupler

This spreader aids removal and installation of main bearing caps. In many locations, a main bearing cap will not drop once released by the stud nuts and side bolts. The main frame has to be spread slightly to open the machined throat that houses the cap. Placement of the spreader is accommodated by the lower ledge of the main frame.

### T55560 GE Main Bearing Cap Lifter

This lifter was designed to aid the lowering and raising of Main Bearing Caps during main bearing change outs. It includes a 3/4" x 15" x 15" Jacking Pad that raises to a height of 8" when extended. Also included is a supply hose with throttling valves for raising and lowering the lifter.



### T12981 & T12991

#### Main Bearing Wrenches

These wrenches are used to loosen or torque main bearing studs. Torquing is accomplished by using the T18250 0-1000 lb.ft. 1" square drive torque wrench. These wrenches provide 1" square female drive to accommodate the torque wrench.

**CAUTION:** These wrenches require high input force and care must be exercised to avoid possible injury.

1	T12981 Left Hand Wrench
2	T12991 Right Hand Wrench
	T18250 0-1000 lb.ft. Torque Wrench



### T15790 Main Bearing Torque Kit

This kit is used where main frames are inverted to remove and install crankshafts. The T16050 0-2,500 lb.ft. air powered torque wrench is used to provide power.

1	T16540 Main Bearing Torquing Fixture
2	T16470 Extension
3	T16480 Socket



### T22040 Pneumatic Barring Over Tool

This pneumatic barring over tool is for engines equipped with a barring feature in the governor gear box. It includes a remote control feature with 20 ft. of hose.

Repair and return service available for quick turn-around.

1	T22020	Air Motor
2	T22031	Complete Remote Control Unit
3	T22030HH	Hose and Hand Valve



### T50250 Manual Barring Over Tool

This barring over tool is to be used on GE engines that are equipped with a notched hub at the free end of the engine.



### T16770 Crankshaft Barring Tool

This tool is used to bar the crankshaft when an engine is being built up in the backshop and sufficient accessories have not been mounted to allow barring in the conventional manner.

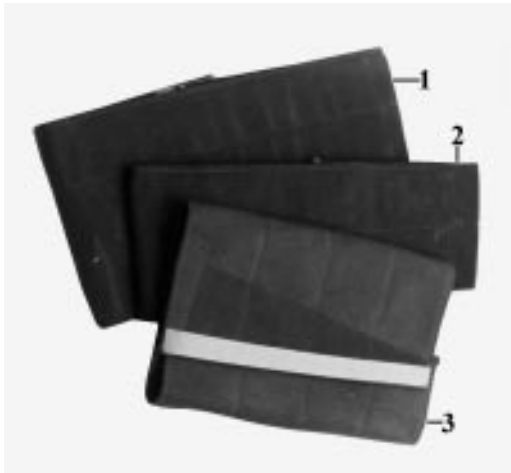
It is 48" long with two pins welded to the tubing that accommodate the hole spacing in the crankshaft drive flange.



### T58440 EFI Barring Arbor

The T58440 EFI Barring Arbor is for newer EFI engines that are not equipped with barring gear boxes. The arbor is installed in the new gear cover and secured. The T22040 Barring Over Tool is then used to power the barring arbor, and the operation is essentially the same as on older units.

**CAUTION:** After the barring operation is complete, the barring arbor must be removed from the engine and the gear cover reassembled.



### Protective Pads for Critical Surfaces

All these pads surround the subject surface and are secured by velcro mating surfaces.

- 1 - T18260 - Crankshaft Main Journal
- 2 - T18270 - Crankshaft Rod Journal
- 3 - T18280 - Master Rod Shank

### T19141 Crankshaft Front Drive Hub Puller Set

This set is used to hydraulically pull the front drive and auxiliary drive hubs from GE crankshafts. A retaining plate is supplied to assure the hubs do not pop off the shaft.

**WARNING:** This retaining plate must be used to provide safe removal of hubs.



	T19141 Front Drive Hub Puller Set
1&1A	T12890 Ram and Pump Set
2	T18950 Retaining Plate
3	T15460 Stud (3 req'd)
4	T14960 Auxiliary Drive Hub Plate with screws
5	T21470 Front Hub Puller Plate
	Metal Tool Box included as well as various bolts, nuts and Washers to complete all operations.

### T55900 Crankshaft Top Dead Centering Device

This tool is placed in the #1 right cylinder bore of a GE Main Frame to determine crankshaft top dead center. It is used mainly on new or remanufactured main frames. The crankshaft is rotated to a position where the travel on the dial indicator is maximum. There may be 2° or 3° where the crankshaft registers maximum travel on the dial indicator. The crankshaft should be centered in the dead band to locate top dead center. Once the crankshaft is in this location, use the T12300 Timing Tram Bar to mark the #1 right main frame doorway with a prick punch mark approximately 1/8" wide.



### T12300 Timing Tram Bar

This tool is utilized to position No. 1 crankshaft throw to top dead center while installing the crankshaft gear train, per the GE instruction book.