

Service Tools Catalog

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FOREWORD

It is the intent of this catalog to provide information relating to the special tools recommended for use in servicing Electro-Motive equipment. It has been updated to include the latest tools available for servicing 710 engines and 60-series locomotives.

This catalog supersedes all catalogs previously issued.

The catalog is divided into five sections to facilitate tool location. Four of the sections are titled to define the general application of the tool, such as "ENGINE" or "ELECTRICAL." Sub-groupings within the section, such as "CYLINDER HEAD" further identifies the area where the tool would be found in the catalog. Section 5 is an alphabetical listing of all the tools contained in the catalog. In addition, the Section No. and Page No. are referenced showing where the tool is listed. Pages in the catalog are numbered consecutively within each section, such as "2-4" and "2-5".

Items indented under an Assembly No. are included in the assembly, but are not necessarily all of the items making up the assembly. Only those items, which are considered subject to replacement, are listed.

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TERMS AND CONDITIONS

WARRANTY

Seller warrants to the original purchaser of Service Tools or Replacement Parts that it will repair or replace any Service Tool or Replacement Part (C.I.F. purchaser's port for export shipments) that fails during the warranty period where such failure results from a defect in workmanship or materials. This warranty is conditioned upon the Service Tool or Replacement Part claimed to be defective being made available to Seller or its designated representative for examination of the claimed defect. Seller shall have the option of requiring, at Seller's expense, the delivery by Buyer of the Service Tool or Replacement Part claimed defective to Seller's factory in La Grange, Illinois, USA, in order to verify the claimed defect and to determine responsibility for the failure. The warranty period shall be within one (1) year after being placed into service or within three (3) years after shipment from Seller's warehouse whichever first occurs.

This warranty does not cover and Seller shall have no responsibility for:

- conditions which, in the reasonable judgment of Seller, arise from misuse, overloading, negligence, alteration, accident or lack of performance of necessary maintenance services;
- diagnostic, removal or re-installation labor charges;
- claims for loss of time, inconvenience, loss of use of the equipment or other special, incidental or consequential damages.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY NON-CONTRACTUAL LIABILITIES INCLUDING PRODUCT LIABILITIES BASED UPON NEGLIGENCE OR STRICT LIABILITY.

MAJOR TOOLS AND MACHINERY

Buyer shall have the responsibility to inquire about contracting an installation engineer to perform the initial set-up and commissioning of purchased item. If a separate quotation is not requested, EMD considers the Buyer to be responsible for tool or machine set-up and commissioning requirements.

PATENTS

Seller shall defend any suit or proceeding brought against Buyer so far as based on a claim that equipment of Seller's specification, or any part thereof, furnished against Buyer's purchase order constitutes an infringement of any patent, if notified promptly in writing and given authority, information and assistance (at Seller's expense) for the defense of same, and Seller shall pay all damages and costs awarded therein against Buyer.

NOTE

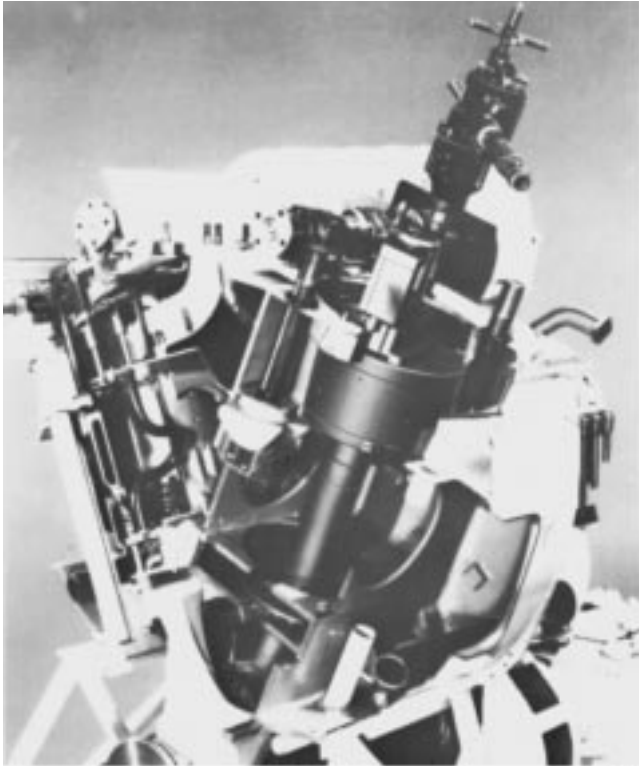
PRICES FOR PARTS LISTED HEREIN AND ADDITIONAL TERMS AND CONDITIONS OF SALE ARE DETAILED IN YOUR RESPECTIVE EMD REPLACEMENT PARTS PRICE BOOK.

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Section 1: Engine

Crankcase

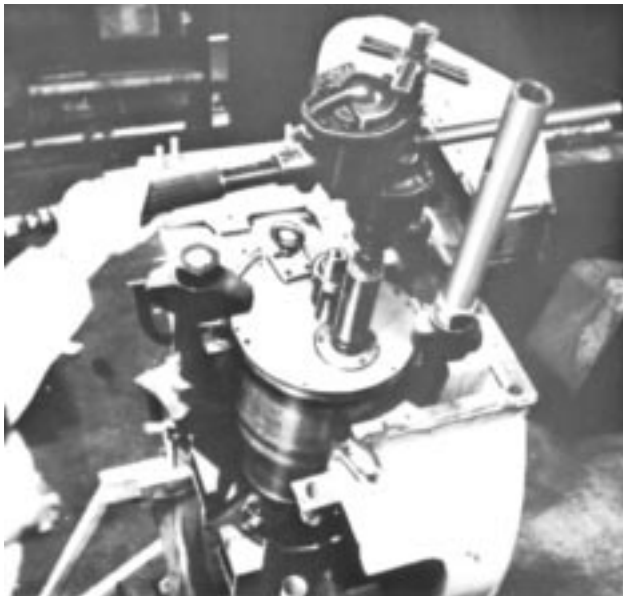


T6582



T6579

8048353 Fixture - Upper Deck Boring - All 567, 645 and 710 Engines
(Does not include Air Motor 8359402)



T7018

8359402 Drill - Air Motor Reversible Multivane
(Applicable to Lower Deck Fixture 8215546 and Upper Deck Fixture 8048353)

(Fixture shown at left)

8215546 Fixture - Lower Deck Boring Bar - All 567, 645 Engines. 710 Engines require adaptive hardware. (Does not include Air Motor 8359402)

Adaptive Hardware - (Permits 8215546 for use on 710 Engines)

1 pc - **40033532 Lower Ring**

1 pc - **40033531 Adapter**

1 pc - **40033530 Key-Rectangular**

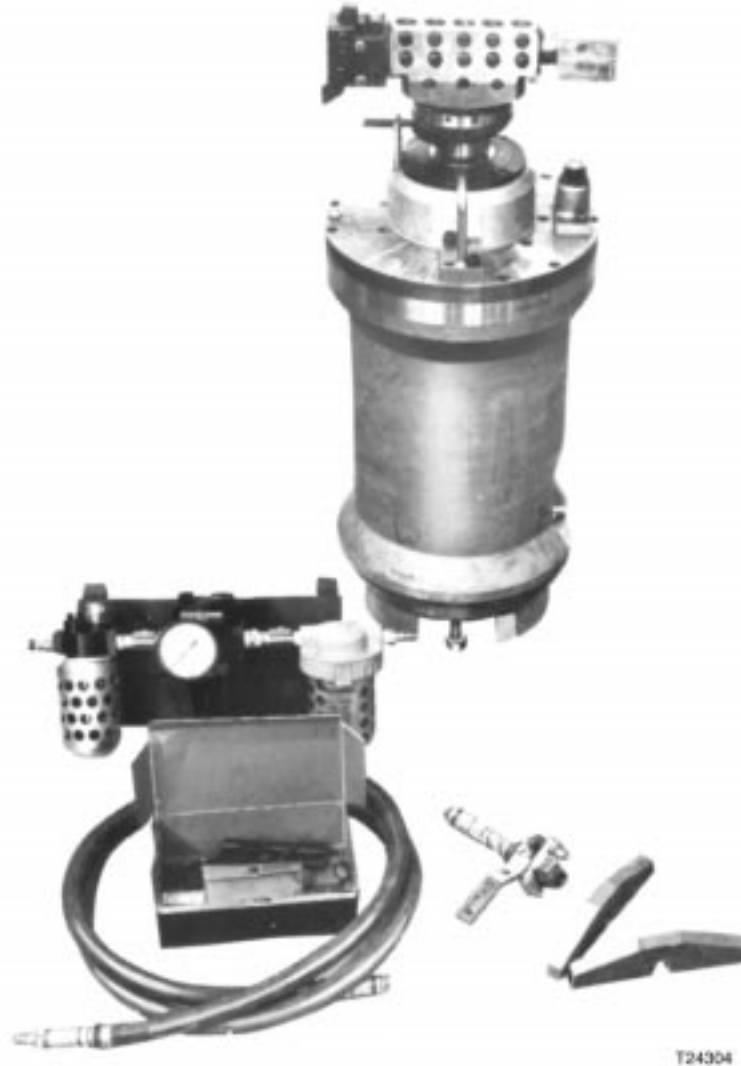
1 pc - **138201 Hex Socket Head Cap Screw**

4 pcs - **138300 Hex Socket Head Cap Screw**

Material needed with Lower Deck Boring Bar Fixture and not included with Assembly (Refer to M.I. 315)

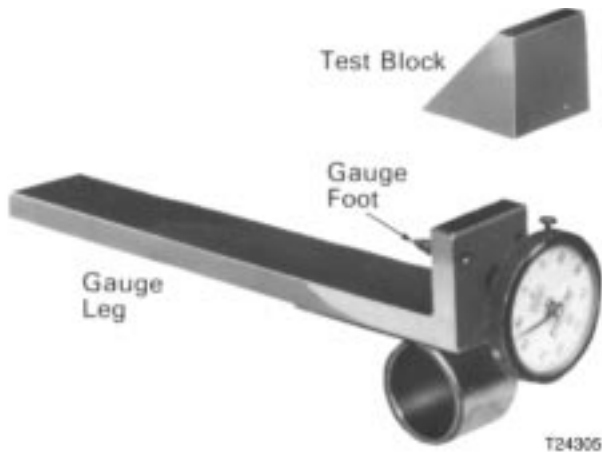
8152217 Stop - Air Motor

8215554 Ring - Pilot for 12.090" Upper Pilot Bore

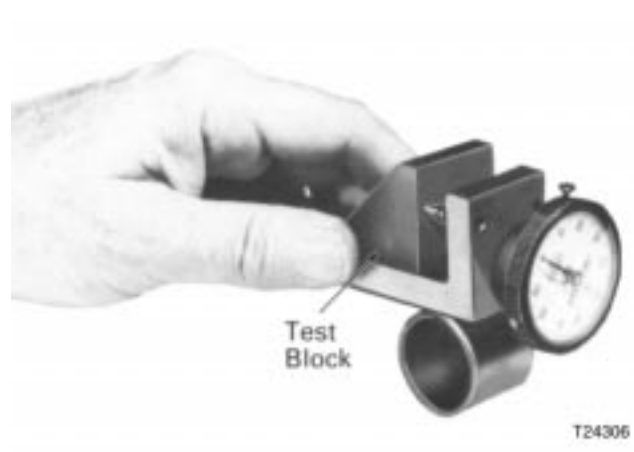


T24304

**9509391 Tool - Resurfacing Cylinder Head Retainer (Refer to M.I. 316)
567C, D, 645 and 710 Engines**



T24305

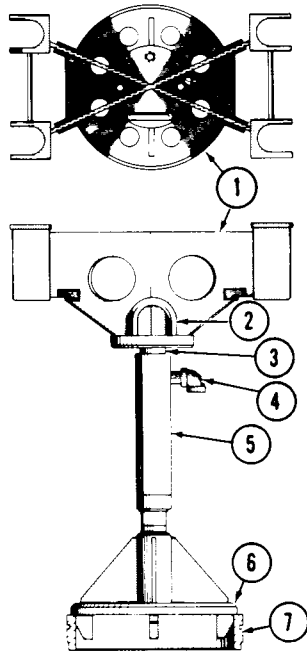


T24306

**9320750 Gauge - Wear Step Head Retainer - Used with
9509391**

**9320756 Block - Wear Step Calibration - Used with
9320750**

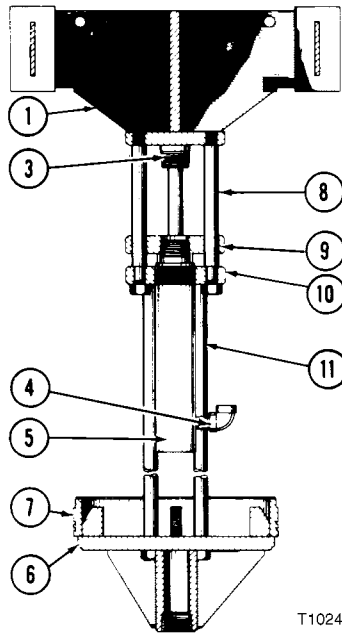
ENGINE - Crankcase



T10250

a. Insert Application

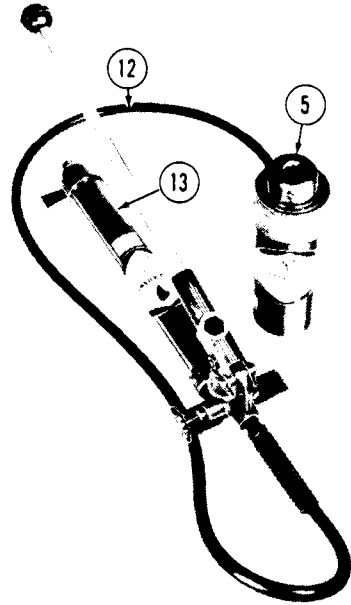
1. Crab Stud Holding Assembly
2. Hoisting Ring
3. Screw Plug
4. High Pressure Hose Connection
5. 10-Ton Ram (8266150)
6. Insert Plate



T10249

b. Insert Removal

7. Insert (8268641)
8. Holding Studs
9. Upper Plate
10. Ram Plate
11. Pulling Studs (40033585)



T6222

c. Hydraulic Jack

12. High Pressure Hose (8152395)
13. Hydraulic Pump (8266149)

8275379 Tool - Lower Liner Insert removing and installing - All Engines

***8078281 Jack** - Lower Liner Insert removal and application

***8275380 Press and Puller** - Liner Insert

9311252 Adapter - New Ram

8282912 Oil - Hydraulic Jack - 1 qt. can

40033019 Adapter - 710 Engine Puller (not shown)

*Included in 8275379

Tool Hydraulic 10 Ton



T28275



T28275A

9528882 Installer - Lower Liner Insert

9528883 Remover - Lower Liner Insert

ENGINE - Crankcase



T6420

8055837 Remover - Upper Main Bearing Shell (Except rear bearings on 8 and 12 cylinder Engines and 2 center bearings on 16 and 20 cylinder Engines) - All 567, 645 and 710 Engines



T185781

8399007 Seal Inserter - Head Frame (for use on square top inside frame covers) - All 567, 645 and 710 Engines

8399008 Seal Inserter - Head Frame (for use on round top inside frame covers) - 645 Engines



T28276

8488833 Remover - Upper Main Bearing used to remove all main bearing shells. All 567 and 645 Engines

40004154 Remover -710 Engines only



T6387

8087086 Cleaner - Piston Cooling Oil Pipe

8488128 Plate - Pre-crush (Line Bore) - Not for 567B and earlier Engines (not shown)



T28277

9549346 Thread File - For redressing rolled UNR threads on crab bolts and main bearing studs



T6344

8069934 Guide - Crab Bolt Oil Seal installing - A and B Engines



T26278

8177167 Gauge - Measuring main bearing cap serration spacing (Includes master gauge)

40038306 Gauge - Used on 710 Engines (not shown)

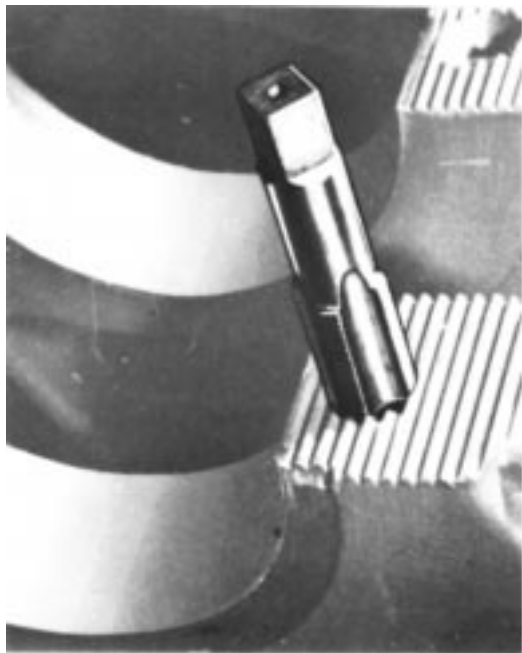
ENGINE - Crankcase



8191591 Wrench - Offset Ratchet - Main Bearing (used with bearing power wrench or multiplier) - All 567, 645 and 710 Engines

9548813 Wrench - Offset Ratchet

8069965 Socket - 1-7/8" hex. 3/4" sq. female drive



8060387 Tap - 1-1/4"-12 Main Bearing Stud - A, B, and BC Engines

8072945 Tap - 1-17/64"-12 (.015" oversize) Main Bearing Stud A, B, and BC Engines

8164416 Tap - 1-5/16"-12 (.062" oversize) Main Bearing Stud A, B, and BC Engines

8164417 Tap - 1-9/32"-12 (.031" oversize) Main Bearing Stud A, B, and BC Engines

8165480 Tap - 1-3/8"-12 (.125" oversize) Main Bearing Stud 567A, B, and BC Engines



8487487 Tool - Main Bearing Cap application (Installation and removal of Caps) - All 567 and 645 Engines. (Not recommended for 710 Engines.)

A support (not shown) is provided with the tool. The support, on which the tool can slide, may be bolted on at the oil pan handhole if desired.

ENGINE - Crankcase



8474807 Power Wrench - Manual - Main Bearing Nuts - 567D and 645 Engines

8335627 Power Wrench - 7:1 Power Ratio

8413343 Anchor Plate Assembly

8474773 Socket - Short 1-7/8" hex. tilt-on - 1" deep

8474774 Socket - Long 1-7/8" hex. tilt-on - 1-17/32" deep

8140761 Ratchet - Adapter 3/4" sq. male drive, 3/4" sq. female

8250085 Chest - 32-1/4" x 8-5/8" x 9-1/2"

8474808 Power Wrench - Air Operated - Main Bearing and Crab Nuts - All 567, 645 and 710 Engines

8425973 Torque Multiplier - 24:1 Power Ratio - Main Bearing Stud Nut

Torque Multiplier - 38:1 Power Ratio - Cylinder Head Crab Nut

9570164 Torque Wrench - 0-75 ft. lbs. 3/4" sq. male drive

Special Extension - 3/4" sq. Female and 1/2" sq. Male 3" Long

Air Motor Includes Torque Reaction Pins

Air Control Kit - Includes Shut-Off Valve, Pressure Regulator, Pressure Gauge and Fittings

8484542 Anchor Plate

Support Plate Angle Drive - 1:1 Ratio 95 (Includes 1/2" and 3/4" sq. Male Adapters) Socket - Anchor 3" I.D.

8211090 Socket - Drive 2-3/4" hex. 1-1/2" sq. male drive

8140761 Adapter - Ratchet 3/4" sq. male drive

8474773 Socket - Short 1-7/8" hex. tilt-on - 1" deep

8474774 Socket - Long 1-7/8" hex. tilt-on - 1-17/32" deep
Chest - 37" x 13-1/2" x 14" (accommodates 2 wrenches)

8437890 Kit - Anchor - Includes Reaction Cradle assembly and Anchor Plate (not shown)

NOTE

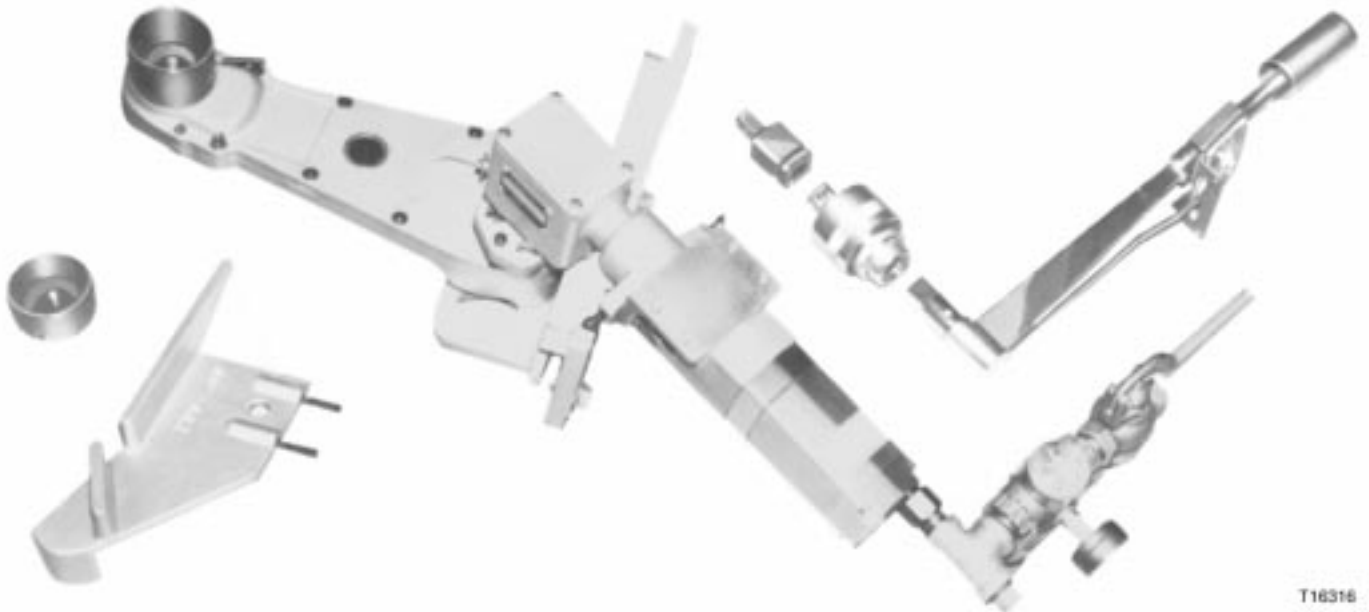
For illustrations of components, except the chest, see kit numbers 8474806, 8437890, and 8408219.



9551713 Set - Manual Torque Multiplier - Crab Nuts - All 567, 645 and 710 Engines

Torque Multiplier - 18.5 to 1 Power Ratio, 3200 ft. lb. Cap. Includes 2-3/4" Socket and Reaction Socket (9572172). Also includes Torque Wrench - 30 to 250 ft. lbs. - Chest (not shown)

ENGINE - Crankcase



8474806 Power Wrench - Air Operated - Main Bearing Nuts 567C, 567D, 645 and 710 Engines

8425973 Torque Multiplier - 24:1 power ratio

Air Motor - (Includes Torque Reaction Pins)

Air Control Kit - (Includes Pressure Regulator, Pressure Gauge, Shut-Off Valve, and Fittings)

8484542 Anchor Plate

Support Plate Angle Drive - 1:1 Ratio - 90 (Includes 1/2" and 3/4" sq. Male Adapters)

8474773 Socket - Short 1-7/8" hex. tilt-on - 1" deep

8474774 Socket - Long 1-7/8" hex. tilt-on - 1-17/32" deep

8250085 Chest - 32-1/4" x 8-5/8" x 9-1/2" (not shown)

***8140761 Ratchet Adapter** - 3/4" sq. male drive

***Torque Wrench** - 0-75 ft. lbs. 3/4" sq. male drive (SWE51)

Special Extension 3/4" sq. Female and 3/4" sq. male 3" Long

**These items are required only when manually verifying the air applied torque.*

NOTE

All components of this kit, except the chest 8250085, are available in the kit number 8474808.



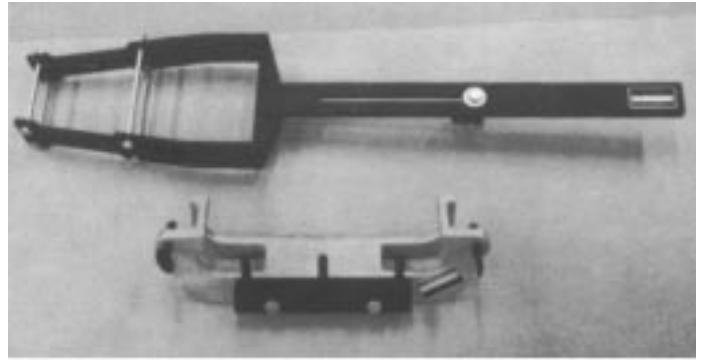
8093717 Extension Handle - 36" - used with 8034085

8034085 Offset Box Wrench - 2-3/4" used on Crab Nuts

ENGINE - Crankcase



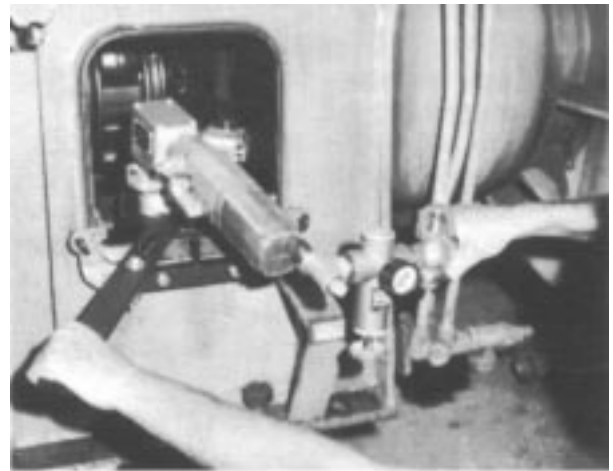
T21451



T16475



T16476



T16474

40014456 Power Wrench - Air Operated - Crab Nuts - 567, 645 and 710 Engines

Torque Multiplier - 38:1 Power Ratio

9570166 Air Control Kit - Includes Shut-Off Valve, Pressure Regulator, Pressure Gauge, and Fittings

Air Motor - Includes Torque Reaction Pins

40011705 Anchor Socket - 3" I.D.

8211090 Socket - Drive 2-3/4" sq. male drive

***8140761 Adapter** - Ratchet 3/4" sq. male drive

***Torque Wrench** - 0-75 ft. lbs. 3/4" sq. Male Drive (SWE51)

8250085 Chest - 36-1/4" x 8-5/8" x 9-1/2" (not shown)

**These items are required only when manually checking the air applied torque.*

NOTE

All components of this kit except for the chest, 8250085, are also contained in the kit number 8474808.

8437890 Adapter Kit - 567, 567A, and 567B Engines

Reaction Cradle Anchor Plate Assembly

Two typical applications shown:

1. Torque Multiplier, 8425973, mounted in Reaction Cradle.
2. Adapter Kit in use with components of 8474806, applying air power to the Bearing Cap Nut.

NOTE

All components of this kit are also available in the kit number 8474808.

ENGINE - Crankcase



T6411

8034600 Tube - Crab Stud Thread Protector (4 required per cylinder)



T6401

8081034 Fixture - Crankcase Water Test Upper Deck Jacket - A and B Engines

8190189 Fixture - Crankcase Water Test Lower Deck Jacket - A and B Engines (not shown)



T6413

8050688 Tap Crab Stud Nut - (This Tap cleans up the 1-3/4"-12 threads of the nut)



T6439

8249739 Shackle - Crankcase Anchor includes Pin - Engine and Generator lifting (1 per base)

(not shown)

8344365 Base - Anchor Shackle -645E (2 per crankcase - on Roots Blown Engines)

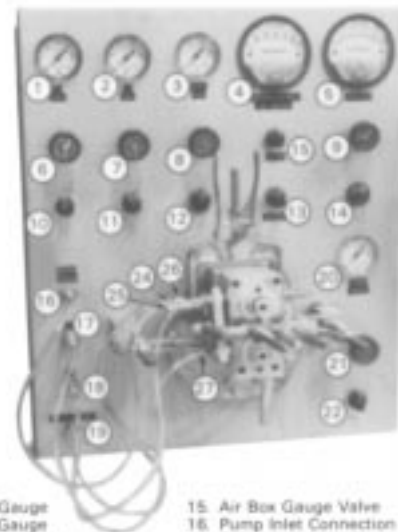
9096428 Bolt - (4 required per base)

9311575 Base - Shackle Anchor all Turbocharged Engines with "E" or "F" Crankcase (this base does not interfere with trap screen) use with one 8344365 base

9096320 Bolt - (4 required per base)

8072352 Base - Crankcase Anchor Shackle - A, B, C, D Engines (2 per crankcase)

272580 Bolt - (4 required per base)



- | | |
|---|---|
| 1. Air PSI Gauge | 15. Air Box Gauge Valve |
| 2. Oil PSI Gauge | 16. Pump Inlet Connection |
| 3. Water PSI Gauge | 17. Oil Hose Connection |
| 4. Water/Air Box Pressure Gauge (Inches Of Water) | 18. Air Hose Connection |
| 5. Crankcase Pressure Gauge | 19. Water High Pressure Connection |
| 6. Air PSI Pressure Regulator | 20. Pump Inlet Gauge |
| 7. Oil PSI Regulator | 21. Pump Inlet Regulator |
| 8. Water PSI Pressure Regulator | 22. Pump Inlet Valve |
| 9. Crankcase Pressure Regulator | 23. Vent Elbow (Not Shown - Located On Rear Of Panel) |
| 10. Air PSI Valve | 24. Port No. 1 - (Pump Discharge Pressure) |
| 11. Oil PSI Valve | 25. Port No. 2 - (Pump Inlet Pressure) |
| 12. Water PSI Valve | 26. Port No. 3 - (Air Box Pressure) |
| 13. Water Gauge Valve | 27. Port No. 4 - (Oil) |
| 14. Crankcase Valve | |

T23767

9339066 Panel - Engine Test for use with 710 Engines - Air-operated

ENGINE - Crankcase



T28279

40014689 Wrench - Crab Nut - 115 volt

40014690 Wrench - Crab Nut - 230 volt

HYDRAULIC - All Engines

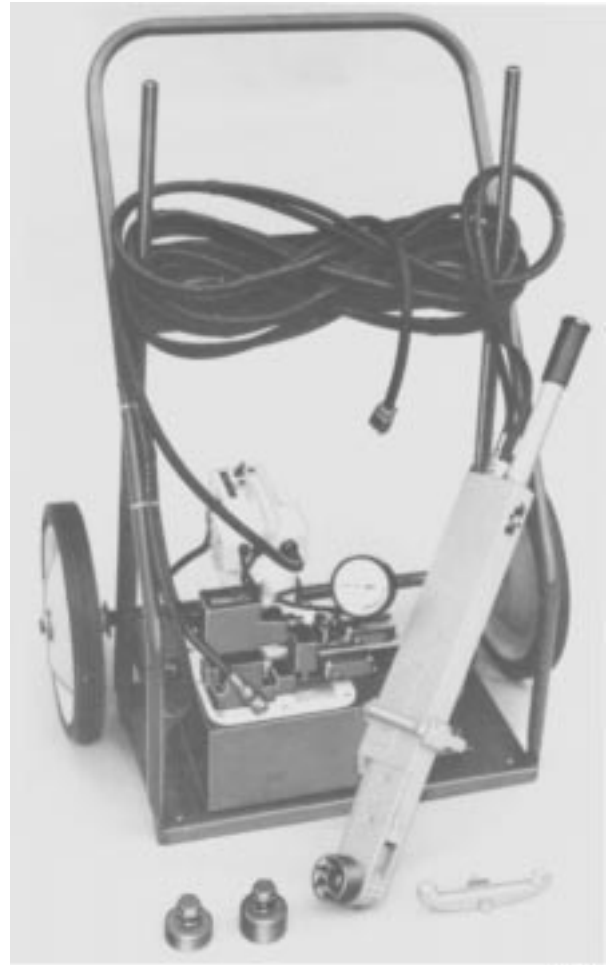
40020518 Switch - Limit



T34472

9532633 Jack - Hydraulic - Barring - 115 volt, All Engines

40014730 Jack - Hydraulic - Barring - 230 volt, All Engines

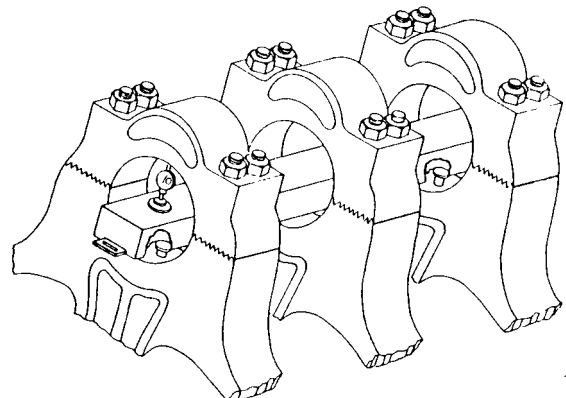


T24678

9523800 Wrench - Main Bearing - 115 volt

40009879 Wrench - Main Bearing - 230 volt

HYDRAULIC - All Engines



T22261

8467738 Measuring Bar - Used for Line Bore (Refer to M.I. 100)

8467737 Gauge Assembly

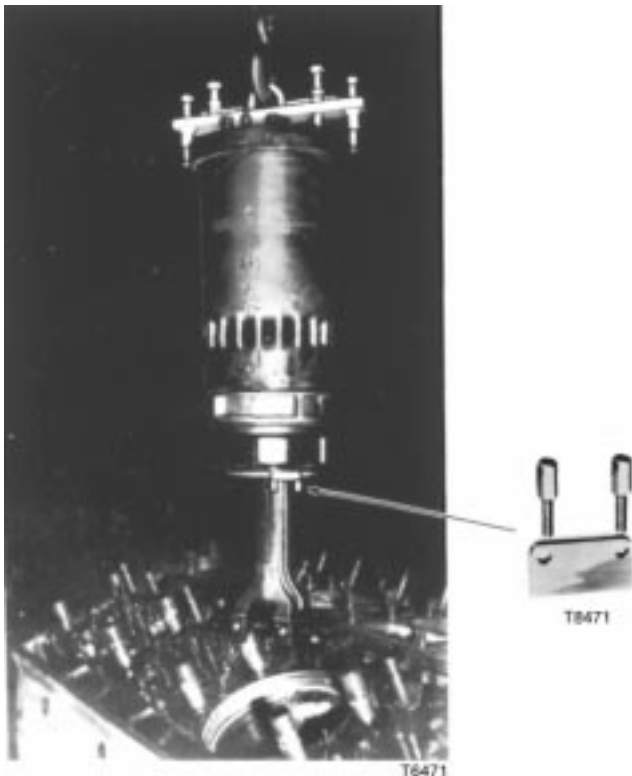
ENGINE - Power Assembly



8417858 Lifter - Power Assembly (eccentric type) - C, D, E, F and G Engines

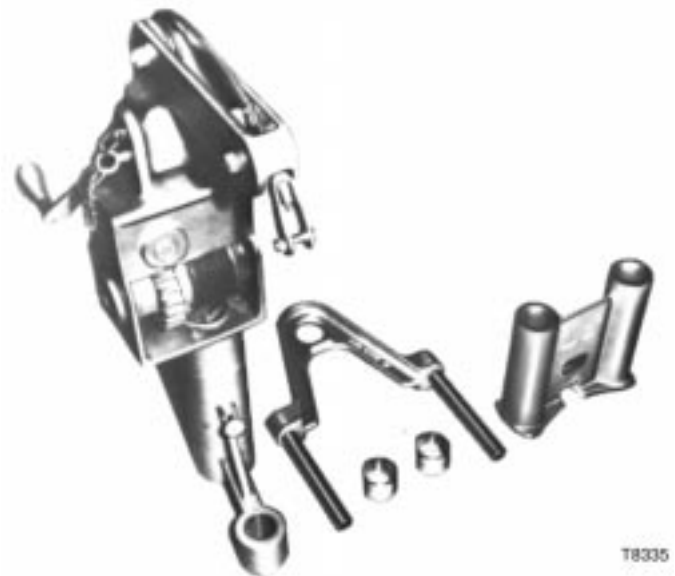


8075894 Remove and Installer - Cylinder Head - All Engines



8158650 Lifter - Power Assembly - 567A, 567B and 710 Engines

- 31017 Washer** - Flat 3/4" nom. (2 required)
- 8187659 Screw** - Pulling (2 required)
- 9414485 Ring** - Pulling Screw (2 required)
- 8211959 Foot** - Swivel (2 required)
- 8160626 Stop** - Piston (1 required)
- 8160627 Bolt** - Piston Stop (2 required)
- 8035623 Eye-Bolt** - Standard (1 required)
- 8209576 Screw** - Jack (2 required)
- Bar** - Pulling (1 required)
- 220086 Nut** - Heavy hex. (2 required)



8213425 Hoist Set - Cylinder Head and Liner - All Engines

- 8206099 Hoist** - Cylinder Head and Liner
- 8213424 Puller** - Cylinder Liner
- 8213423 Adapter** - Used under the Hoist - 567C, 567D and 710 Engines
- 8288228 Adapter Pair** - Used on GP and SD Locomotives with Dynamic Braking - All Engines

ENGINE - Power Assembly



8417859 Tool - Piston Holding - Power Assembly lifting - All Engines



9080908 Locator - Crab Bolt - 645 Engines (used to center Crab Bolts)



8197044 Lifter - Power Assembly (eccentric type) - 567A and 567B Engines

131017 Washer - Flat 3/4" nom. (2 required)

8187659 Screw - Pulling (2 required)

8250704 Pin - Lifting (1 required)

9414485 Ring - Pulling Screw (2 required)

8250706 Arm - Lifting (1 required)

8250707 Screw - Thumb (1 required)

100737 Screw - Machine - R.H. 6-32 x 7/8" Long (2 required)

8211959 Foot - Swivel (2 required)

8160626 Stop - Piston (2 required)

8160627 Bolt - Piston Stop (2 required)

8313614 Ring - Jack Screw (2 required)

8209576 Screw - Jack (2 required)

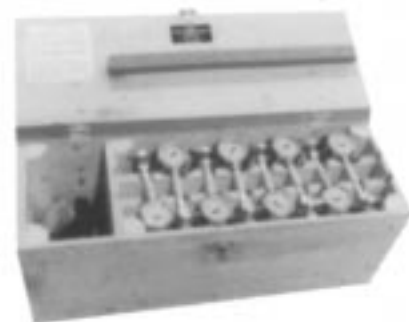
8250821 Bar - Pulling (1 required)

8208127 Chain - Machine Screw to Lifting Arm (as required)



40034179 Borgscope - Fiber Optic Internal Inspection of Power Assembly Components through the Injector Hole.

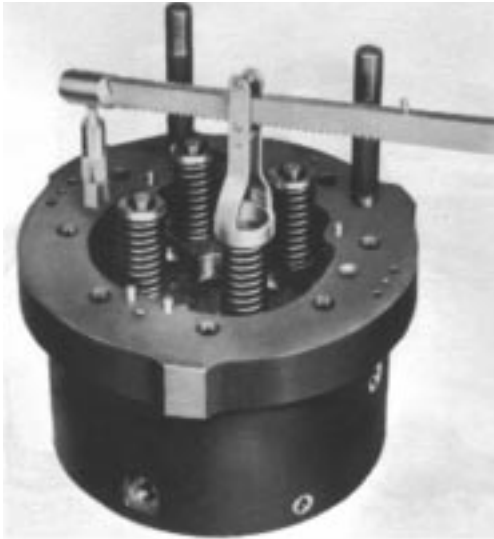
8417881 Clamp - Connecting Rod positioning - Assembly removal - 645 Engines



9572281 Compression Tester - Set of eight and wooden case - Used to measure compression in EMD power assemblies when the engine is shut down

9572282 Individual Tester

ENGINE - Cylinder Head



T16619

8033783 Compressor - Single Valve Spring (use with 8034054 Adapter) - All 567, 645 and 710 Engines



T16614

8215081 Compressor - Multiple Valve Spring - Hand Crank type - All 567, 645 and 710 Engines



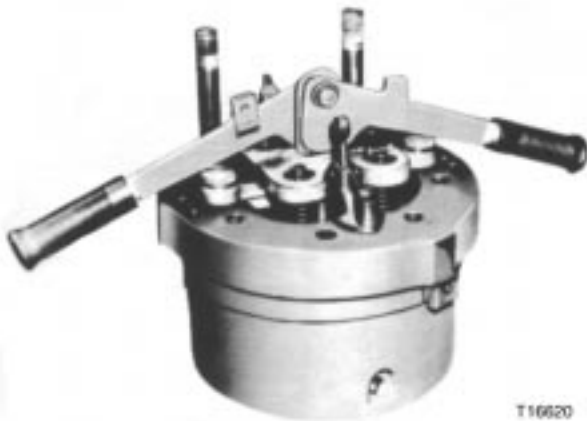
T6404

8034054 Adapter - Valve Spring Compressor (use with 8033783 Compressor) - All 567, 645 and 710 Engines



T6351

8070903 Guide - Valve Bridge Snap Ring installing - All 567, 645 and 710 Engines



T16620

9546582 Compressor - Multiple Valve Spring - Manual - All 567, 645 and 710 Engines

ENGINE - Cylinder Head



8072927 Installer - Hydraulic Lash Adjuster - All 567, 645 and 710 Engines



9082392 Wrench - Triple hex. right hand 1-1/16" liner nuts (used without removing Rocker Arm Assembly). All Engines

9082393 Wrench - Triple hex. left hand 1-1/16" liner nuts (used without removing Rocker Arm assembly). All Engines

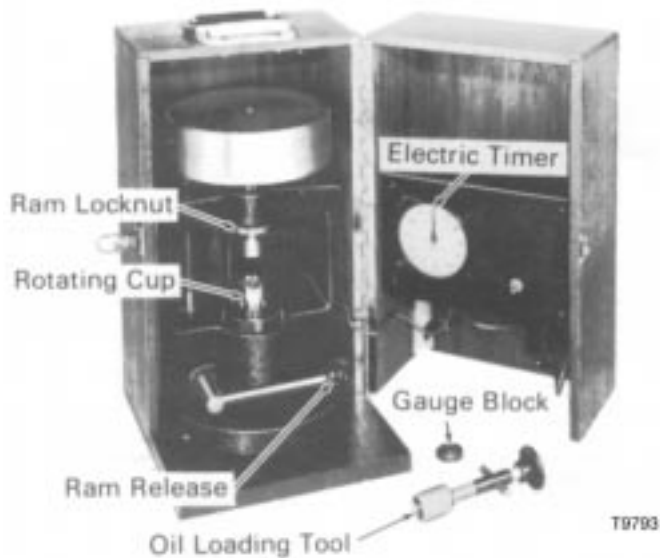


8070883 Compressor - Valve Bridge - All 567, 645 and 710 Engines

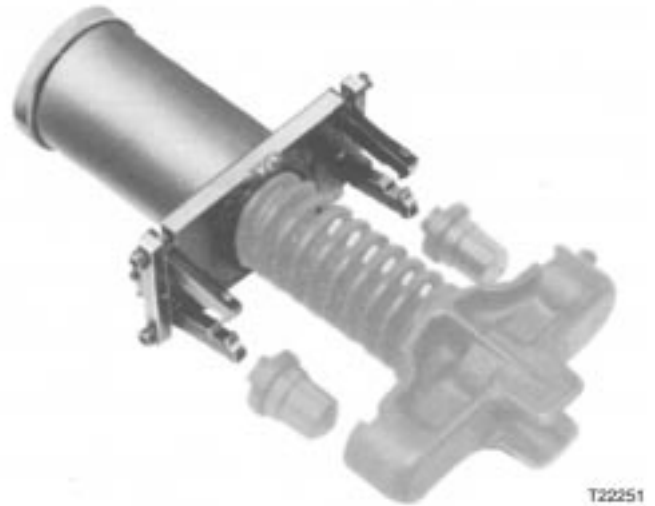


8032587 Wrench - Cylinder Test Valve

ENGINE - Cylinder Head



8080632 Remover - Hydraulic Lash Adjuster Snap Ring - All 567, 645 and 710 Engines



8267432 Test Stand - Lash Adjuster 110 volts 60 Hz - All 567, 645 and 710 Engines

8267434 Gauge Block

8267435 Tool - Oil loading

8276834 Shaft - Weight

8276835 Cup

8276836 Motor - 110 volts 60 Hz

8276837 Ball Bushing

8276838 Micro-Switch

8276839 Timer - "Leak-Down"

8276840 Nose Assembly - Large
Nose Assembly - Small

8299249 Test Stand - Lash Adjuster 220 volts 60 Hz - All 567, 645 and 710 Engines

8267434 Gauge Block

8267435 Tool - Oil loading

8276834 Shaft - Weight

8276835 Cup

8276836 Motor - 220 volts 60 Hz

8276837 Ball Bushing

8276838 Micro-Switch

8276839 Timer - "Leak-Down"

8276840 Nose Assembly - Large
Nose Assembly - Small

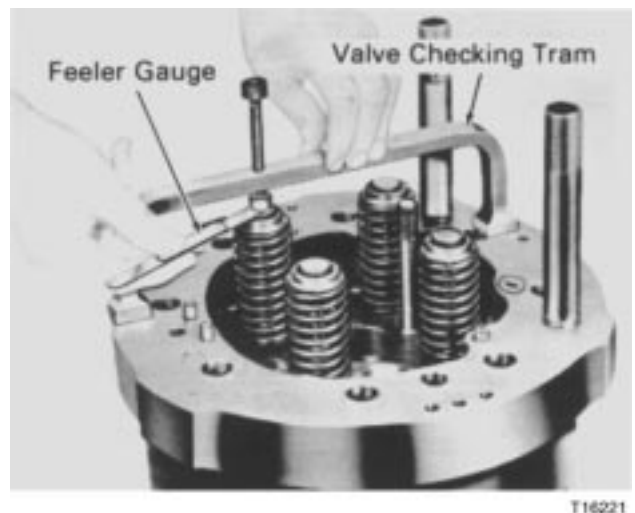
8309795 Test Stand - 240 volts 50 Hz

8276528 Oil - Lash Adjuster Test Stand - Five gallons quantity (not shown)

8394719 Puller Multiple - Hydraulic Lash Adjuster - All Engines

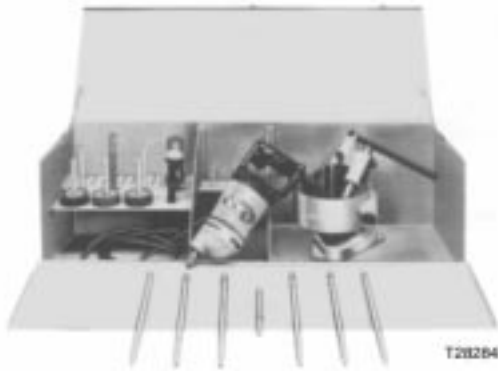
8395481 Arms - Lash Adjuster Puller (4 required per puller)

40026007 Kit - (1) Spring (2) Arms



8042773 Tram - Valve Height Checking (used with a Feeler Gauge such as 8067337)

**Valve and Valve Seat Reconditioning Tools
Valve Seat Grinders**



TOOL SET PART NO.	DRIVER TYPE	DRIVER PART NO.
8035775	115 V. Motor	8200893
8041445	230 V. Motor	8200894
8332668	Air Motor	8332667

All Three Tool Sets Above Are Applicable To All 567, 645 and 710 Engines and Include All The Following Items:

QTY.	PART NO.	DESCRIPTION
1	See Above	Driver
3	8069928	Dressing Tool With Pilot
1	8073108	Dial Indicator With 3-1/2 Inch Contact Finger
1	8073150	Pin - Pilot Removing
1	8035430	Wheel - 30 Grinding (Finishing) #3 Hole
1	8035433	Pilot - Tapered - .626 Diameter
1	8035723	Pilot - Tapered - .627 Diameter
1	8035724	Pilot - Tapered - .628 Diameter
1	8035725	Pilot - Tapered - .629 Diameter
1	8035726	Pilot - Tapered - .630 Diameter
1	8035727	Pilot - Tapered - .631 Diameter
3	8200892	Holder - Grinding Wheel
1	9318275	Box Metal (For Tools)
1	3263558	Spring - Lifting (Free Length 5/12)
1	9095490	Wheel - 45 Grinding (For 65 Angle)
1	9095491	Wheel - 30 Grinding (For 20 Angle)

Valve Grinders

9310355	Grinder - Valve and Tool 230 Volts 60 Cycle Single Phase
9310356	Grinder - Valve and Tool 230 Volts 60 Cycle Three Phase
9310357	Grinder - Valve and Tool 115 Volt 50 Cycle Single Phase
9310358	Grinder - Valve and Tool 230 Volt 50 Cycle Single Phase
9310359	Grinder - Valve and Tool 230 Volt 50 Cycle Three Phase
9310360	Grinder - Valve and Tool 115 Volt 60 Cycle Single Phase

Stones — Valve Seat Grinding

9095490	45 -2-5/8 Diameter - Grinding 65 Relief Angle on Exhaust Port Side of Valve Seat
9095582	30 -2-7/8 Diameter - Grinding 20 Relief Angle on Combustion Chamber Side of Valve Seat On Heads Made Prior To January 1, 1955
9095491	30 -2-5/8 Diameter - Grinding 20 Relief Angle on Combustion Chamber Side of Valve Seat on Heads Made After January 1, 1955

Stone - Valve Grinding

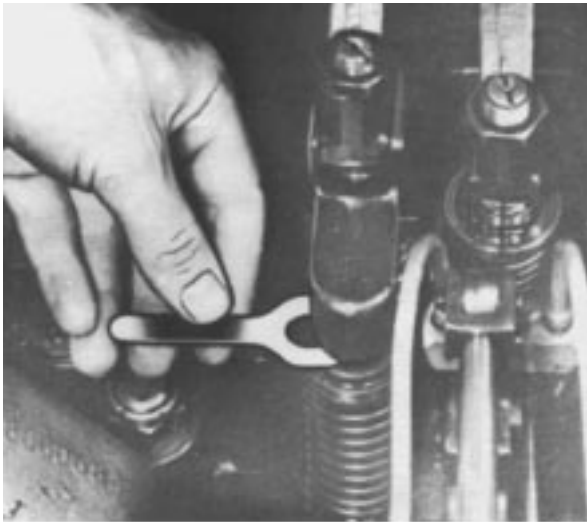
9310381	Valve Stem End Grinding Wheel
9310382	Valve Face Grinding Wheel With Hub
9310380	Drive Belt For Valve Grinders

ENGINE - Cylinder Head

For Dual Fuel Engines Only Valve and Valve Seat Reconditioning Tools

In Addition To The "Valve and Valve Seat Reconditioning Tool Sets" Listed, The Following Are Requires:

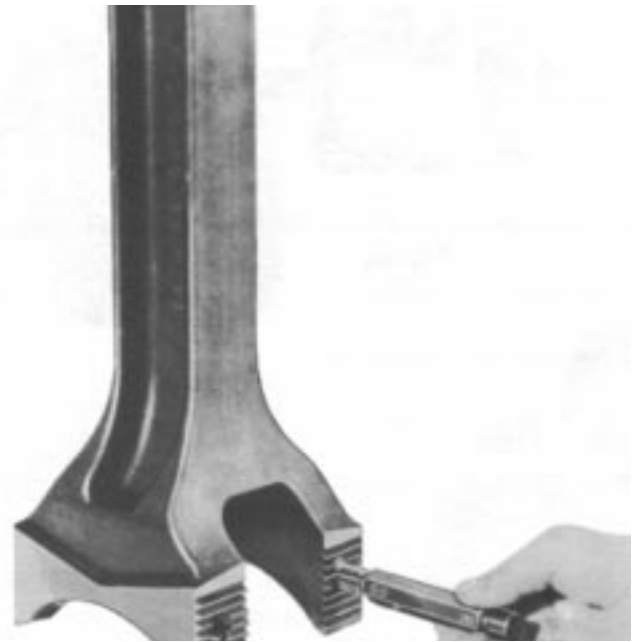
QTY	PART NO.	DESCRIPTION
2	8219491	Pilot (Use With Dressing Tool Below)
2	8069928	Dressing Tool - Grinding Wheel
1	8219492	Wheel - Gas Valve Seat Grinding - 45
1	9095581	Wheel - Roughing 15 Angle
1	8219493	Pilot - Tapered - .4365 Diameter
1	8219494	Pilot - Tapered - .4375 Diameter
1	8219495	Pilot - Tapered - .4385 Diameter
2	8052976	Holder - Grinder Wheel
1	8227624	Installer - Remover (Valve Guide)
1	8239526	Compressor - Spring (Injector Linkage Actuator)
1	8238658	Compressor - (Gas Exhaust Valve Spring)
1	8245511	Wire - Lead (For Head to Piston Clearance Measurement)
1	8220965	Collet - Gas Valve (Refacing Gas Valve Seat)
1	8259734	Jack - Injector Linkage Setting
1	8260462	Cup - Suction (Gas Valve Seat Seal)



T6365

8107788 Gauge - Lash Adjuster minimum clearance -
567, 645 and 710 Engines

8227624 Installer/Remover - Valve Guide - Dual Fuel
(not shown)



8060247 Basket - Cylinder Head Carrying



T21326

8224241 Installer/Remover - Cylinder Head Exhaust
Valve Guide - All Engines



8213518 Tester - Valve Seat Seal

8213519 Vacuum Cup - Valve Seat Tester (shown on tool)

8260462 Cup - Suction Gas Valve Seat Dual Fuel (not shown)



8069928 Dressing Tool - Valve Seat Grinding Wheel includes Pilot



8214743 Diamond - Hex 3/8" carat (for later model Dressing Tool 8069928) (not included in Kit) for female threaded shaft

8073108 Indicator - Dial - Valve Seat Checking, used with Valve Reconditioning Tapered Pilots

ENGINE - Cylinder Head



8173996 Fixture - Tapered Pilot Checking - Use with 8035775, 8041445 and 8332668

8200947 Indicator - Dial



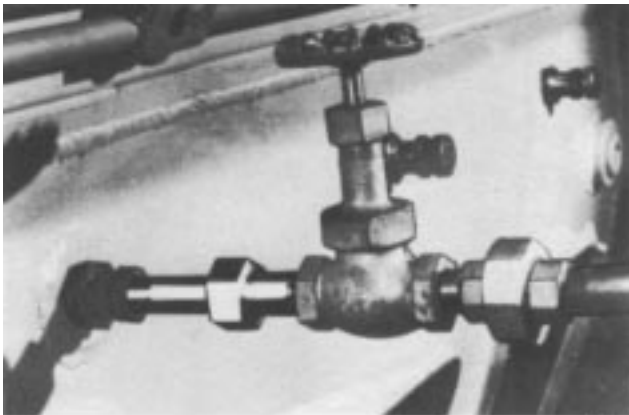
T8329



T8330

8190311 Counterbore - Cylinder Head Nut Seat

8228215 Cutter - Cylinder Head Counterbore



T6359

8211907 Brush Cleaner - Cylinder Head Liner Stud Hole fits 1/4" Drill Chuck



T19610

8141439 Cleaner - Cylinder Head Valve Guide - Fits 1/4" Drill Chuck



T28285

8070872 Adapter - Cylinder Test Valve - Pressure Test

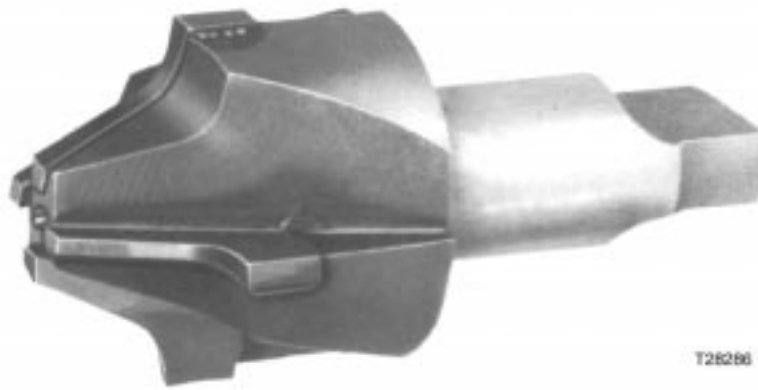


T6363

8064804 Reamer - Cylinder Test Valve Seat
8080383 Cutter



T6367

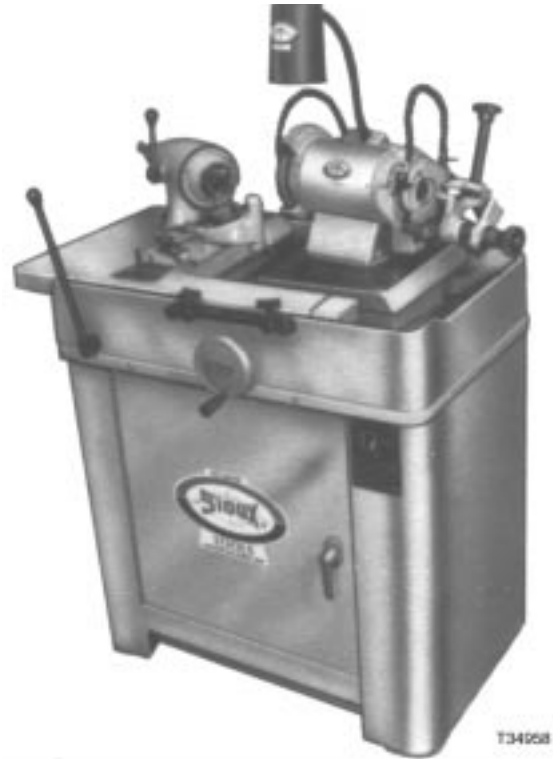


9560927 Cutter Injector Well radius - Used to change the 3/16" injector well to fireface radius to the 5/16" dimension used on Current Production Cylinder Heads (All heads prior to June 1982)

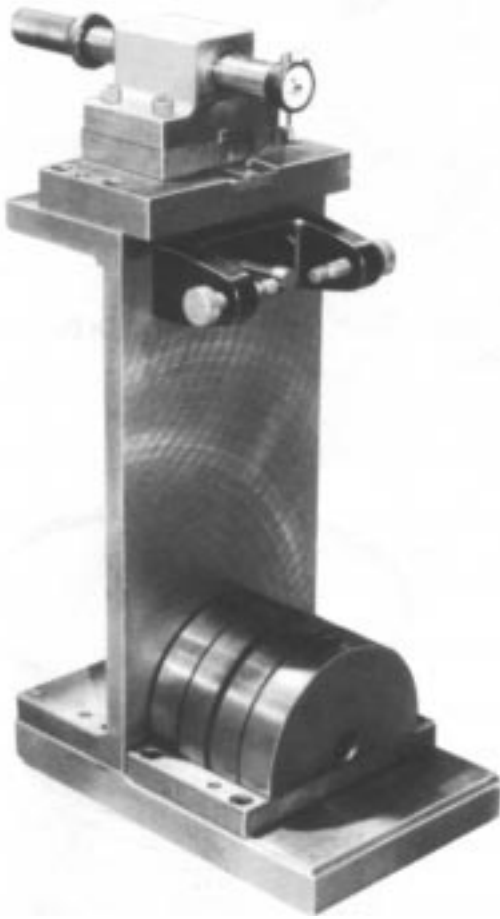


POWER PACK HAND HOIST

8351742 Hoist Set - Cylinder Head and Liner - Used on GP, SD and DD Locomotives



-
- 9310355 Valve Grinder** - 230 volt, 60 Hz, 1 phase - All Engines
 - 9310356 Valve Grinder** - 230 volt, 60 Hz, 3 phase - All Engines
 - 9310357 Valve Grinder** - 115 volt, 50 Hz, 1 phase - All Engines
 - 9310358 Valve Grinder** - 230 volt, 50 Hz, 1 phase - All Engines
 - 9310359 Valve Grinder** - 230 volt, 50 Hz, 3 phase - All Engines
 - 9310360 Valve Grinder** - 115 volt, 60 Hz, 1 phase - All Engines



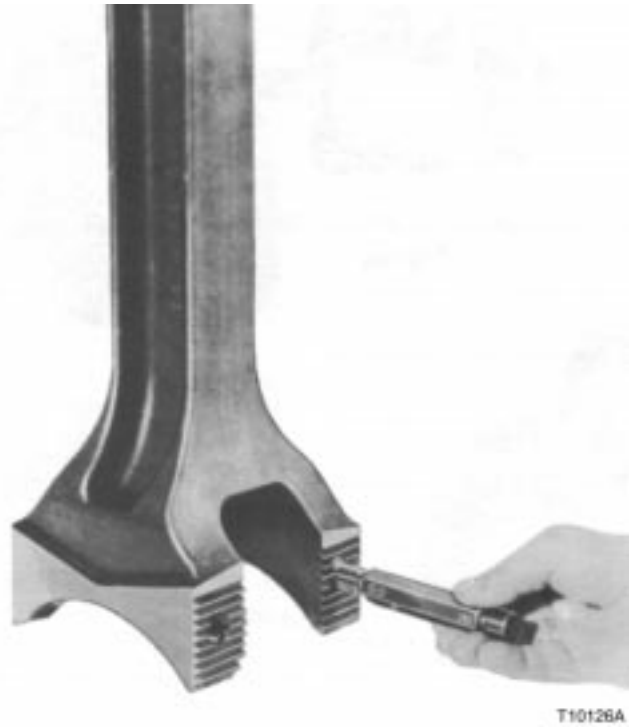
-
- 8257730 Fixture - Connecting Rod Checking Gauge**
 - 9533794 Dial Indicator**
 - 8257737 Gauge Plate**
 - 8257738 Gauge Plate**
 - 8257739 Spacer Plate**

9548502 Master Rod Gauge - (Used to check Rod Checking Fixture [8257730] for accuracy) (not shown)

40038305 Fixture - Similar to 8257730 with Electronic Digital Readouts (not shown)



8210136 Extension - Torque Wrench 3/4" Drive - All 567, 645 and 710 for pin to rod bolts

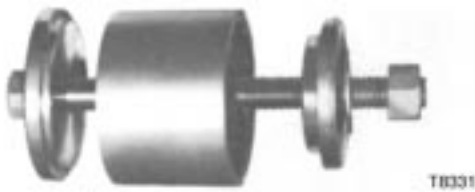


-
- 8265955 Gauge** - Assembly Plug GO and HI - Fork Rod - Tapped Holes
 - 942440 Gauge** - GO 5/8" - 18 UNF
 - 8265956 Gauge** - HI 5/8" - 18 UNF
 - 776908 Handle** - Gauge



8052958 Support - Fork Rod (used in the removal of Blade Rod) - For all 567, 645 and 710 Engines

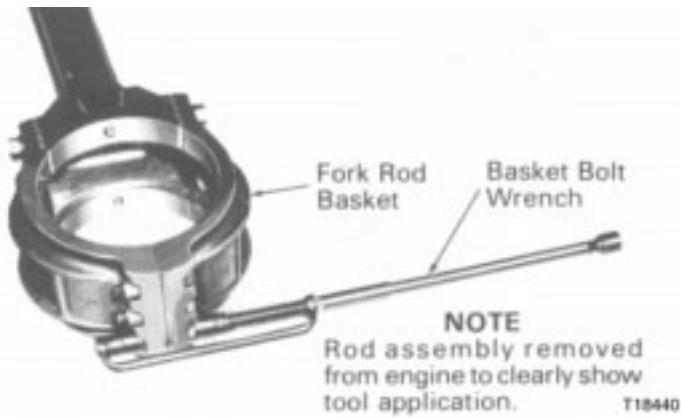
ENGINE - Rod



8220552 Remover - Piston Pin Sleeve and Floating Bushing - A and B Engines



8237117 Pliers - Sleeve Snap Ring Piston Pin Bearing - A and B Engines



8236718 Wrench - Basket Bolt and Nut - For all 567, 645 and 710 Engines



8243661 Wire - Lead 1/8" Diameter for Head to Piston Compression Readings - 5 lb. Spool (use with 8243220 Holder)

8245511 Wire - Lead 3/16" Diameter for Head to Piston Compression Readings - 5 lb. Spool (for 567 CDF Engines)

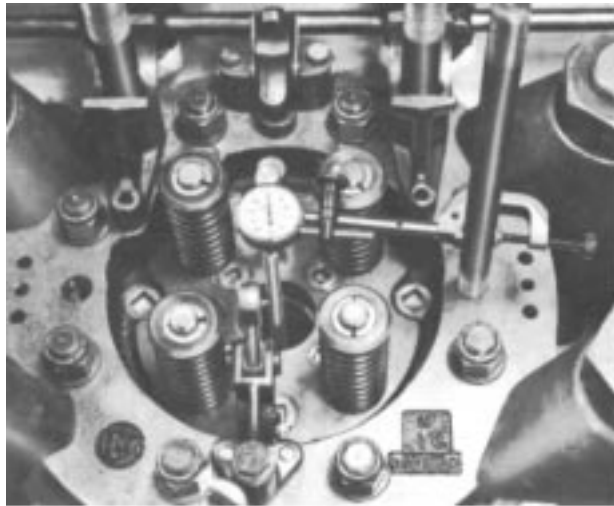


8062033 Boot - Blade Rod Protector - For all 567, 645 and 710 Engines

8062034 Boot - Fork Rod Protector - For all 567, 645 and 710 Engines



8243220 Holder - Lead - Piston to Head Compression readings - For all 567, 645 and 710 Engines (for 8243661 Wire only)



T19052

8051833 Rod - Top Dead Center Checking, 567, 645 and 710 Engines



T6403

8040413 Bolt - Eye - Piston Pulling, 1-1/2" long

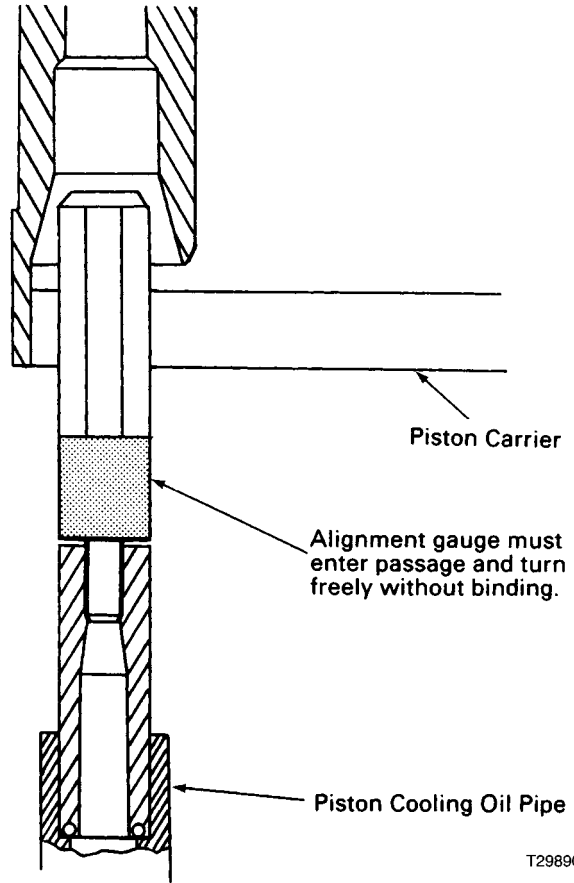
8071625 Bolt - Eye - Piston Pulling, 18" long



Snap Ring Remover

T10069A

8171633 Remover - Piston Carrier Retainer Snap Ring



T29890

8071720 Gauge - Piston Cooling Oil Pipe

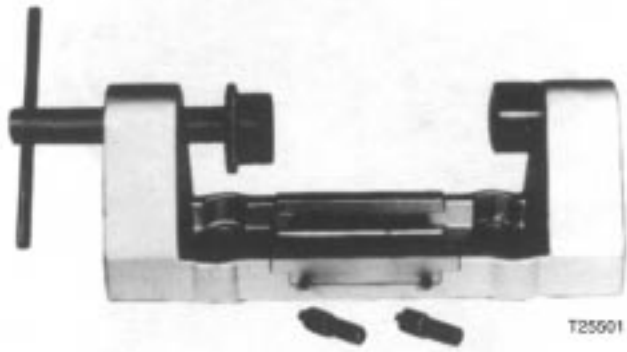
9566330 Tap - Special - 1/4-20-SL - (Used for retapping Piston Pin Carrier 8442120 with serial subsequent to 82-J0800 - Refer to "Pointers" article dated 6-L-84, 4-M-84, 4-P-84, 4-DR-84



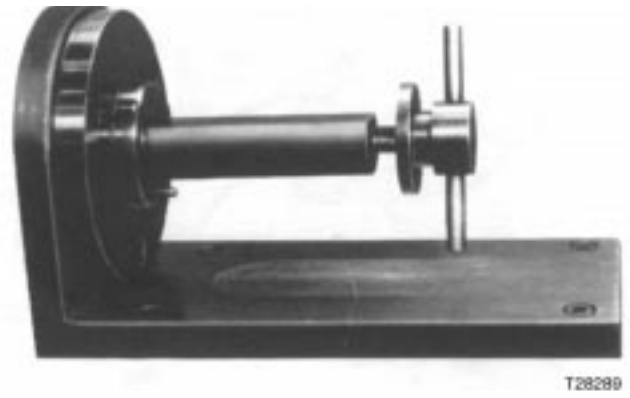
T28298

8311268 Indenter - Insert to Carrier - C, D, and E Engines only

ENGINE - Carrier



9534635 Fixture - Holder for Piston Carrier - For all Engines



9542253 Fixture - Holder for Piston Carrier - For all Engines

ENGINE - Piston



8275503 Gauge - Piston Ring Groove .194" - .203" (3/16" Standard) D, E, F and G Engines

8331113 Gauge - Piston Ring Groove .210" - .219" (1/64" oversized) D, E, F and G Engines

8331043 Gauge - Piston Ring Groove .225" - .234" (1/32" oversized) Top Groove D, E, F and G Engines

8225256 Gauge - Piston Ring Groove .251" - .260" A, B, and C Engines

8225257 Gauge - Piston Ring Groove .282" - .291" (1/32" oversized) A, B, and C Engines

8275378 Gauge - Piston Ring Groove .266" - .275" (1/64" oversized with Top Groove) A, B, and C Engines



8275489 Brush, Wire - Piston Groove Carbon Removal



9333846 Guide - Piston Ring Compressor - Standard 645 and 710 Engine (Also available for oversize requirement)

8034087 Guide - Piston Ring Compressor - Standard diameter 567 Engine

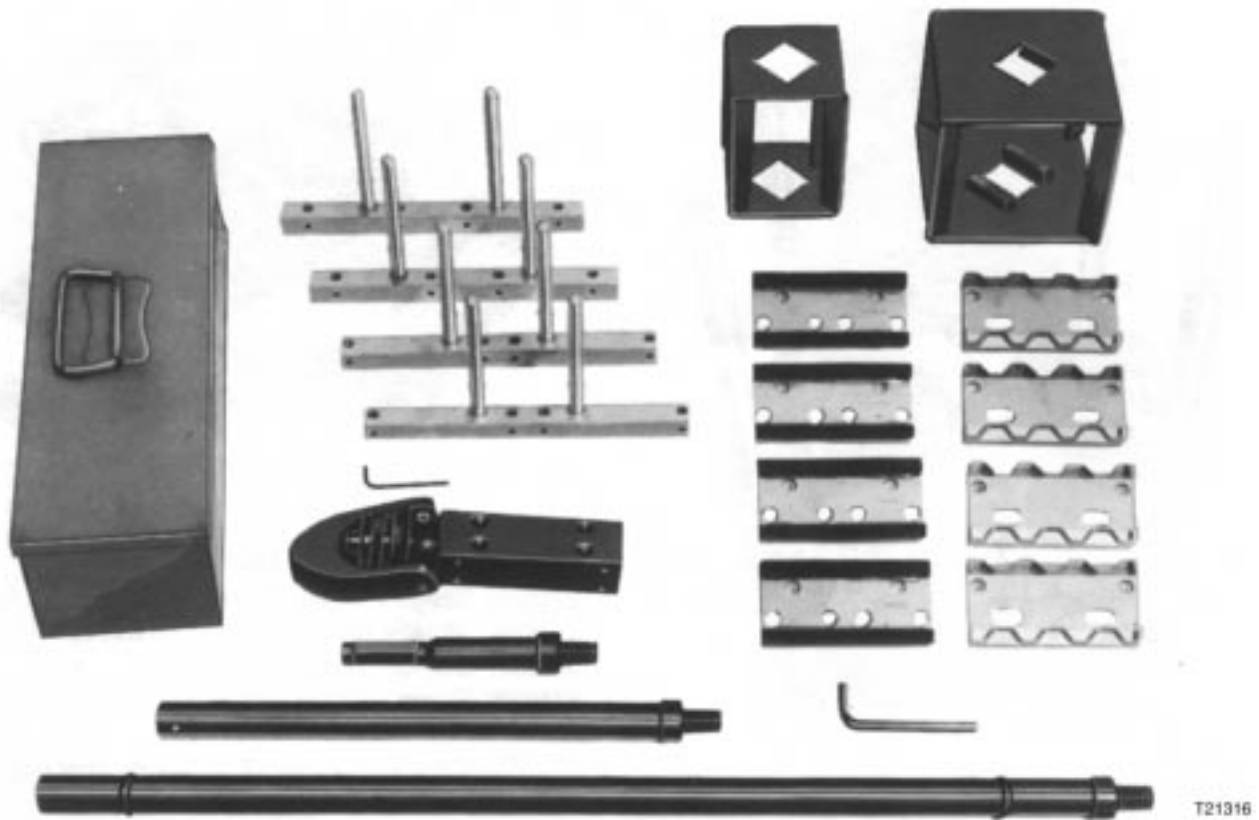


8194036 Expander - Piston Ring 567 Engine

(not shown)

8349892 Expander - Piston Ring 645 and 710 Engine

40036373 Spring Return



8491575 Hone Set - Complete - 567 and 645 Engines
excluding "Hub" Liners

8431586 Body Hone

8431588 Shank Long Drive

8491576 Stone and Guide Block Set

8343116 Master Holder Set - Double Length

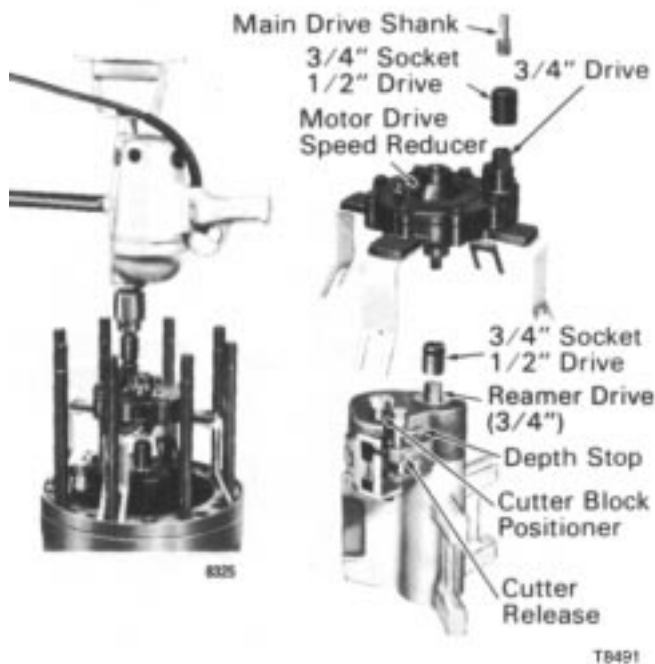
8058891 Support Stone - 6" to 9" Liners

8068123 Support Stone - 8" to 11.5" Liners

8078882 Box Metal Tool

8084163 Stone and Guide Block Set - Single Length

8431587 Master Holder Set



8228303 Reamer - Cylinder Liner Ridge standard size
567 Engines

8228305 Blade - Cutter Replacement

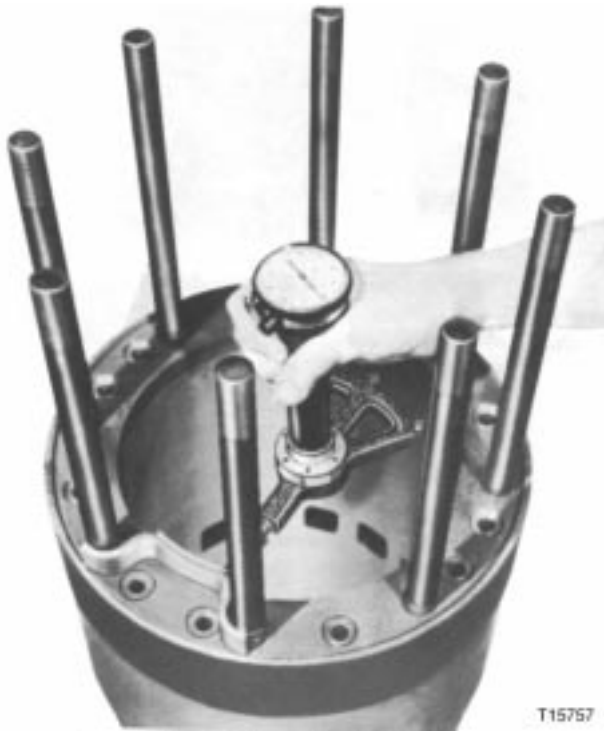
8374969 Reamer - Cylinder Liner Ridge standard and
oversize - 645 and 710 Engines

8379037 Blade - Cutter

8228304 Reducer - Ridge Reamer Speed

8157327 Blade - Cutter for Engines prior to 567C Ridge
Reamer (8157279) (not shown)

ENGINE - Cylinder Liner



8275258 Gauge - Cylinder Liner Bore Dial

8278540 Gauge - Master Calibration of 8275258 for 567 Engines - Variable tolerance 8.4996" to 8.5006" diameter

8278541 Locator - Liner Bore Dial Gauge

8374970 Gauge - Master Calibration of 8275258 for 645 Engine - Tolerance of 9-1/16" diameter

9321276 Gauge - Master 8.2500" for checking Main Bearing Steel Bore (used with 8275258)

40038306 Gauge - Master, Main Bearing Steel Bore for 710 Engine (similar to 9321276)



8078883 Brush Wire - For cleaning Honing Stones (not shown)

(not shown)

8425724 Grease - Silicone - 5.3 oz tube

For application of Engine Seals and "O" Rings

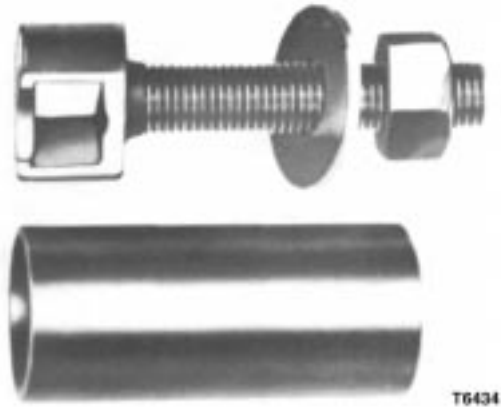


8116358 Lifter - Cylinder Liner - All Engines



9570042 Ridge Remover - For grinding the ridge at the end of the Ring Travel on Liners that cannot be reamed

ENGINE - Accessories

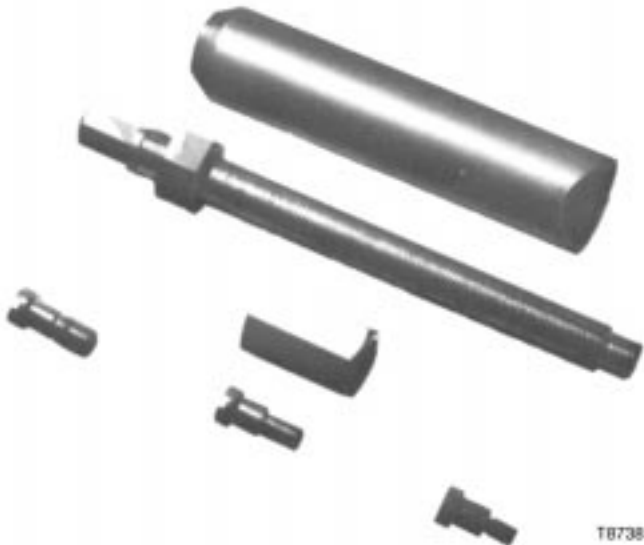


8068028 Puller - Flywheel Bolt - For 3 piece flywheel - 567 Engines



8164914 Guide - Lower Liner Seal Ring - A and B Engines

8176923 Guide - Upper Liner Seal Ring - A and B Engines



8225989 Puller Harmonic Balancer - Complete

8225992 Screw - Shoulder 3/8" - 24

8225991 Screw - Shoulder 5/16" - 24

8225990 Screw - Shoulder 1/4" - 28

8220496 Puller - Harmonic Balancer (3 required) (not shown)

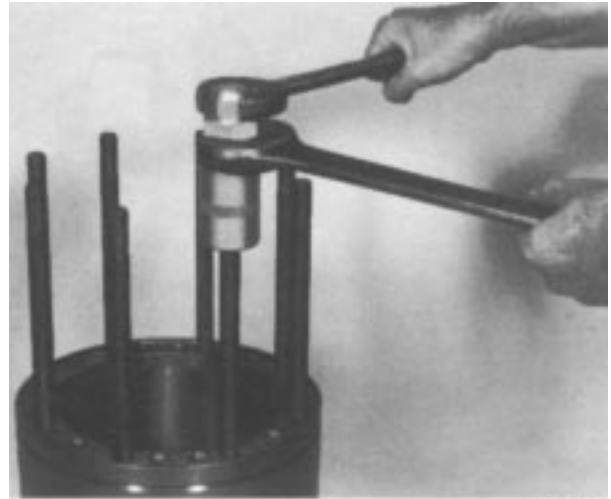


8080197 Gauge - Harmonic Balancer Spring Pack Deflection



T6445

8067644 Anvil - Pressing Bushings into Blower Driver Gears - 12 cyl. 567 Engine



T15543

8414879 Puller and Driver - Liner Studs



T35164

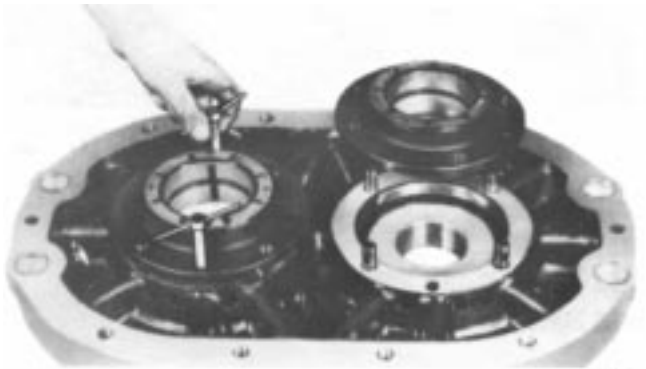
8488380 Remover Tool - Stud or Dowel Puller with 9/16" Collet

ENGINE - Air Intake and Exhaust



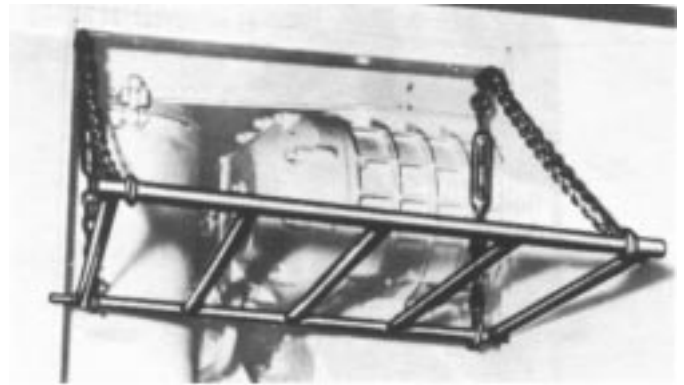
T9527

8052915 Fixture - Blower Rotor removal and installation



T8514

8070932 Remover - Blower End Plate Bearing (2 required)



T6510

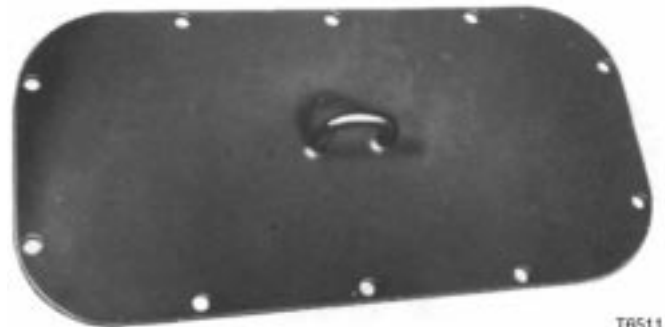
8062873 Platform - Blower Support (assists in removal and installation of Engine Blower for Switcher Locomotives)



T6447

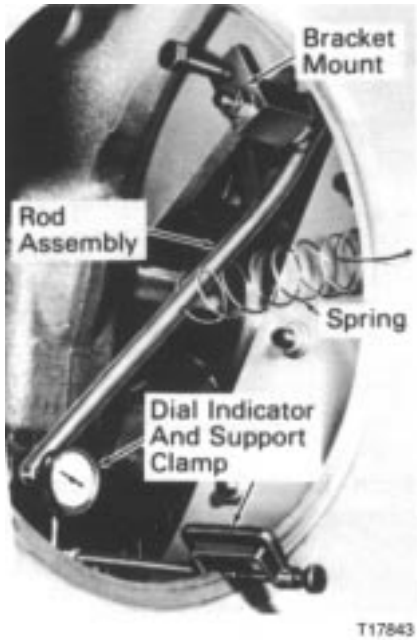
8067645 Anvil - Pressing Bushings into Governor Drive Gears

8067646 Anvil - Pressing Bushings into Idler Gears 567 Engines



T6511

8072929 Plate - Blower Lifting



8466308 Bar - No. 1 Idler Gear Clearance Checking

8121868 Spring - No. 1 Idler Gear Checking - not included with 8466308

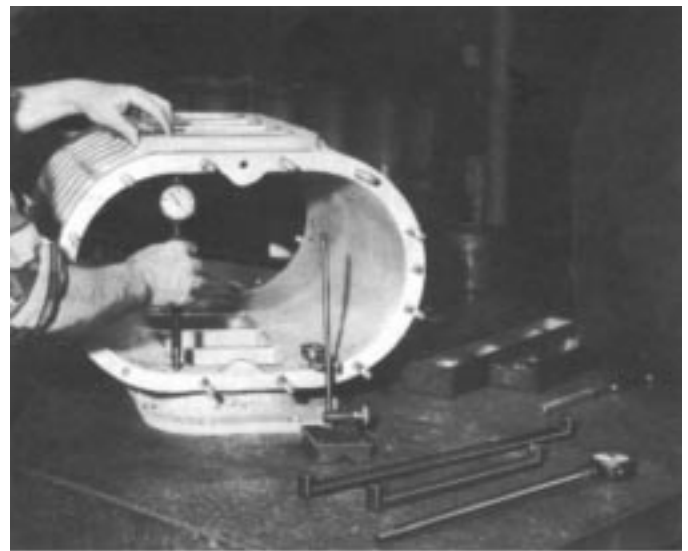


8049057 Puller - Manual - Blower Gear Hub - removal only

8052916 Press - Manual - Blower Gear Hub - installation only



8268828 Blower Hub Nut Socket



8268436 Dial Gauge - Blower Housing, horizontal

8268437 Dial Gauge - Blower Housing, vertical

8268483 Master Gauge - For 8268436

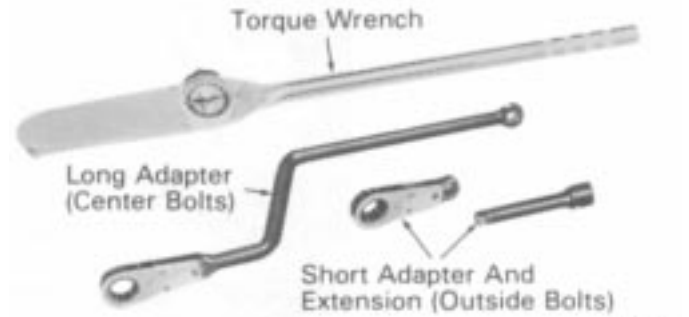
8268439 Master Gauge - For 8268437

ENGINE - Air Intake and Exhaust



T6509

8049131 Gauge - Feeler - .010" to .020" x 36" long (not shown)



T17690

8463511 Torque Wrench Kit - Exhaust Manifold - 567, 645 and 710 Turbocharged Engines

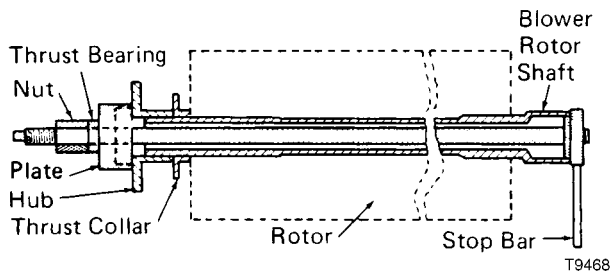
8463512 Wrench

8463513 Adapter

8463514 Extension - 5"

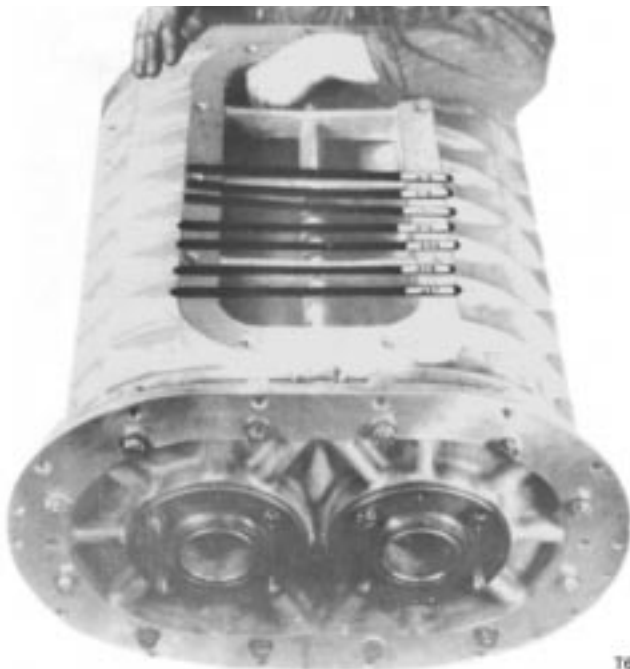
8463515 Torqometer - 0-200 ft. lbs.

8477369 Box (not shown)



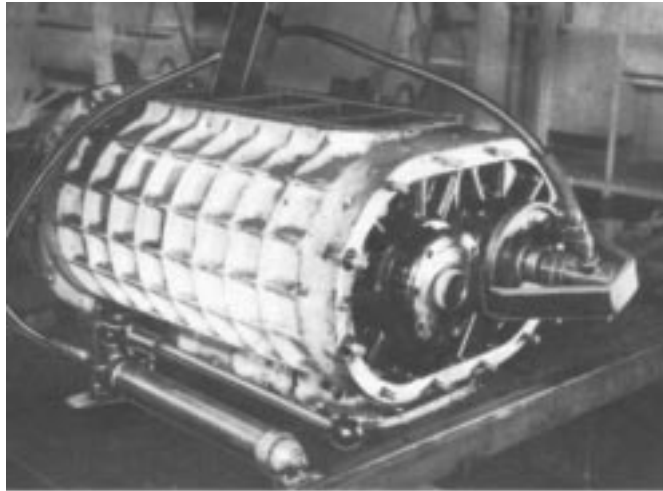
T9468

8052916 Press - Manual - Blower Gear Hub - installation only

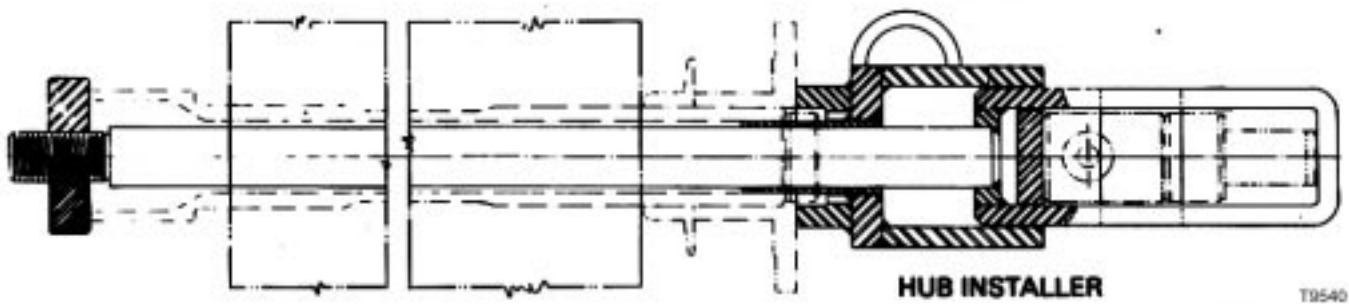


T6521

8049132 Gauge - Feeler - .008" to .020" x 12" long



T9538



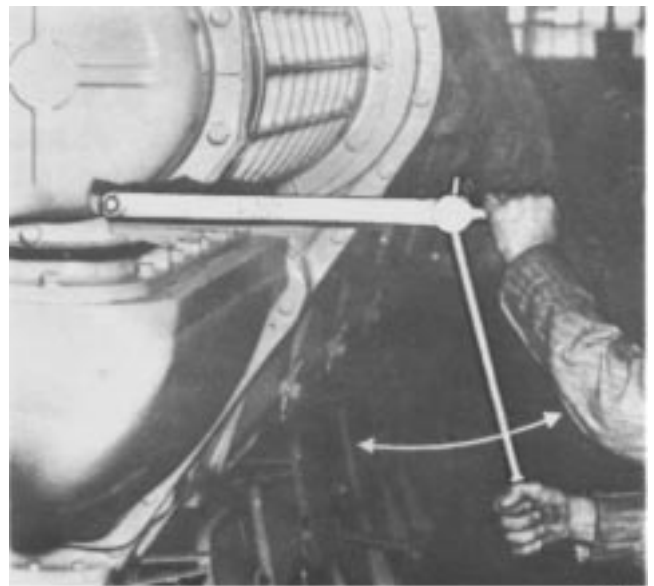
T9540

8264362 Hydraulic Remover/Installer - Blower Timing Gear Hub



T6518

8070926 Wrench - Blower Shaft Locknut



T6536

8177166 Wrench Set - Blower Nut miscellaneous



9525495 Driver - Used in freeing Dowels from Turbocharger Carrier Bearing Support during rotation conversion on Marine Engines. (Refer to M.I. 276)

ENGINE - Cooling and Lubrication



8212484 Box - Socket - Wrench, Half Moon 5/8" x 3/4" -
Water Pump mounting nuts



8277270 Wrench - Spanner, Lube Oil Filter Relief Valve -
Michiana



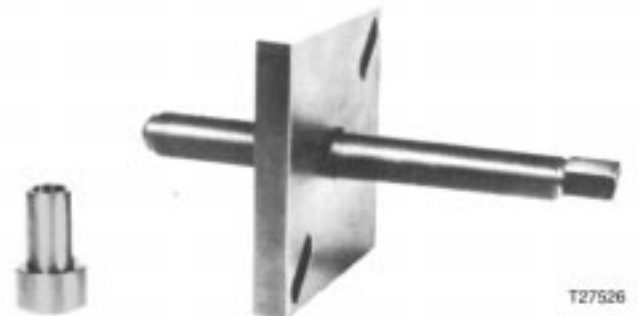
9519601 Wrench - Water Pump Mounting Bolt

New offset water pump wrench fits all water pump mounting bolts. Pump changeout time can be cut nearly in half. The wrench fits around the housing making the inner two mounting bolts easily accessible. Also, torquing of all mounting bolts is now possible.

8277271 Wrench - Socket, Screwdriver, Lube Oil Filter Relief Valve - Michiana (not shown)



8354367 Puller - Water Pump Impeller



9549072 Disassembly Tool - Water Pump

9549073 Plate

9549074 Screw - Special

9549075 Adapter



8052959 Installer - Water Pump Impeller (used to assemble the Impeller to the Drive Shaft Housing) All 567, 645 and 710 Engines



9312771 Steel Plate - 3/4"

9312770 Adapter - (used with 8263531 - Jack Hydraulic -
For removing Water Pump Impeller Housing)



9325061 Kit - Lube Oil Filter Tank Pressure Test

8032123 Gauge - 0-100 psi

8471010 Hose Assembly

9321341 Socket - Quick disconnect

8040325 Connector

116436 Connector

Connected to the Male Quick Disconnect provided on later model Locomotives, (9321340 - Male Quick Disconnect - can be added to Tanks not so equipped) this kit provides a convenient means for monitoring filter pressure drop to determine filter change out.



9321340 Male Quick Disconnect - 1/4 FPT

9321341 Female Quick Disconnect - 1/4 FPT



40021839 Lever - Injector Pop Test - 567, 645 and 710 Engines

Injector Calibration Test Stand

The EMD calibration stand can be used to determine injector fuel output so that each injector can be adjusted for rated fuel delivery. This will ensure a balanced set of injectors for smooth and economical engine performance.

These tests stands supersede test stand 8332467.

TEST STAND PART NO.	POWER REQUIRED		
	VOLTAGE	Ø	HZ
9545110	220	3	60
9547232	230/240	1	50
9547515	380	1	50
9547516	440	3	60
9547517	440	3	50
9547518	220/440	3	50

Master Injectors

Master Injectors are available for use with injector test stands to establish acceptable output limits for fuel injectors.

There is a master injector for the high and low limit of each range of injector outputs.

MASTER KIT	HIGH MASTER	LOW MASTER	INJECTORS APPLICABLE
8382726	8382720	8382719	5229295 5229300
8382727	8382722	8382721	5229200 5229290
8382728	8382724	8382723	5229310
8381672	8391671	8391670	5229250 5229330
9318974	9318973	9318972	5229320 5229335
9532801	9532802	9532800	5226210
40002764	40002765	40002766	5226700
40034198	40034199	40034200	5227000 5227285

NOTE

All above kits used with Injector Calibration Stand.

— All kits consist of Storage Case containing Two Master Injectors, one set at High Limit and one at Low Limit of particular Injector Calibration Range.



9323395 Gauge - Injector Tip Air Flow (shown with spray tip installed)

NOTE

Use Master Tips listed below to show high and low limits.

PART NUMBER	DESCRIPTION
8418391	Low Master for 5-.0134"-160 and 6-.012"-150 tips
8418392	High Master for 5-.0134"-160 and 6-.012"-150 tips
8418393	Low Master for 6-.0134"-160 and 7-.012"-160 tips
8418394	High Master for 6-.0134"-160 and 7-.012"-160 tips
9099824	Low Master for 6-.015"-160 and 7-.014"-160 tips
9099825	High Master for 6-.015"-160 and 7-.014"-160 tips
9532800	Low Master - All 645F Engines.
9532802	High Master - All 645F Engines.
9546046	Low Master for 6-.011"-150 tip
9546047	High Master for 6-.011"-150 tip
9564645	High Master for 7-.0152"-150 tip
9564646	Low Master for 7-.0152"-150 tip
40002765	High Master - All 710 Engines.
40002766	Low Master - All 710 Engines.



9549055 Injector Tester

The tester is used to evaluate the condition of new, rebuilt, or used injectors by checking leakage rate and fuel spray patterns at the injector tip. Supersedes tester 8478027.

40018091 Holder - For 710 Engine

8203258 Oil - Injector Test 50 gallon drum (Discontinued)

8219007 Oil - Injector Test 5 gallon drum (Discontinues)

9574910 Bucket - Plastic



8017824 Wrench - Fuel Pump Cap Nut - Passenger SW, G8, G12, G16 and others that have 8020257 Fuel Pump

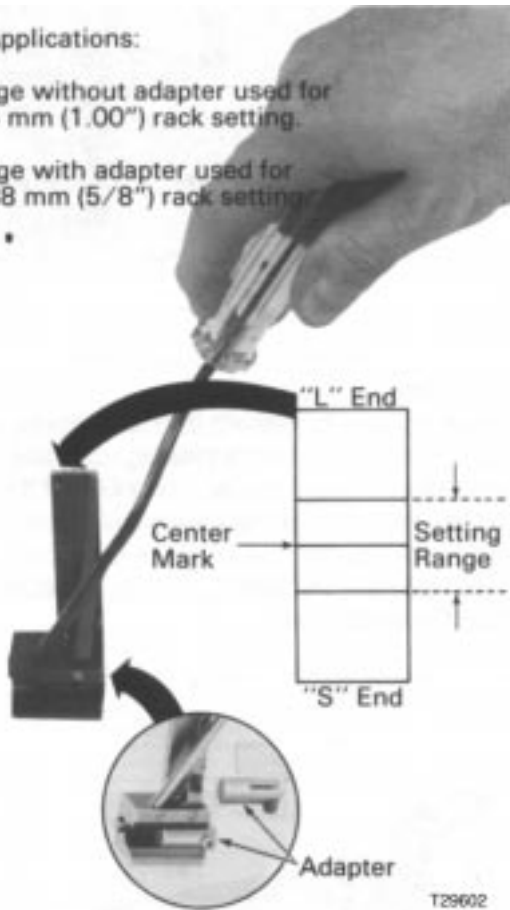
ENGINE - Fuel



8107539 Wrench - Screwdriver - 1/8" hex. - Used to back out the Set Screw (4 turns only) to release the Stop Pin on the Injector Follower - All Engines

Gauge Applications:

1. Gauge without adapter used for 25.4 mm (1.00") rack setting.
2. Gauge with adapter used for 15.88 mm (5/8") rack setting.



8339610 Gauge - Rack Setting indicating (standard 1" setting)

8357591 Adapter - .625", 5/8" setting

8244900 Block, Gauge

8380701 Adapter - For 56/64"

8380702 Adapter - For 58/64"



8159147 Wrench - Fuel Pump Packing Nut - GP, SD, DD, GT Pin size 3/16"



8017825 Wrench - Fuel Pump Plug (designed for removal of Fuel Pumps applied to passenger SW, G8, G12, G16 Fuel Pump 8020257)



8330339 Optoscope - Needle Valve Seat

8330338 Bulb Light



8276319 Test Fixture - Needle Valve Injector (used for checking Needle Valve opening pressure) must be used with another Test Fixture such as 9549055

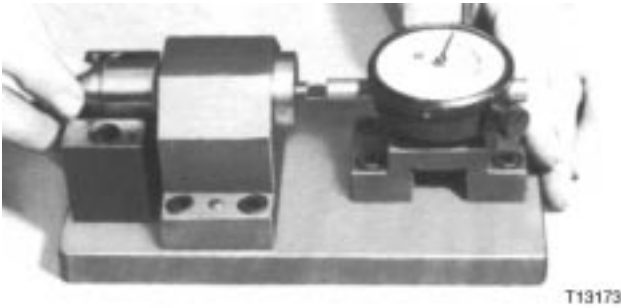
ENGINE - Fuel



8431626 Rack - 20 Injector Holding



8034638 Gauge - Injector Timing



8360447 Gauge and Master - Needle Valve Lifter Indicator



8069989 Vise - Pin - 0.0" - .040"

8122519 Wire - Hardened Steel .011" diameter x 500 ft. long



8041183 Bar - Pry - Injector Removing



9083713 Wrench - Spin-On Fuel Filter



8214852 Countersink - Fuel Oil Manifold Block



8243516 Oil Can - Forced Feed - 7" long spout positioned at 50° angle



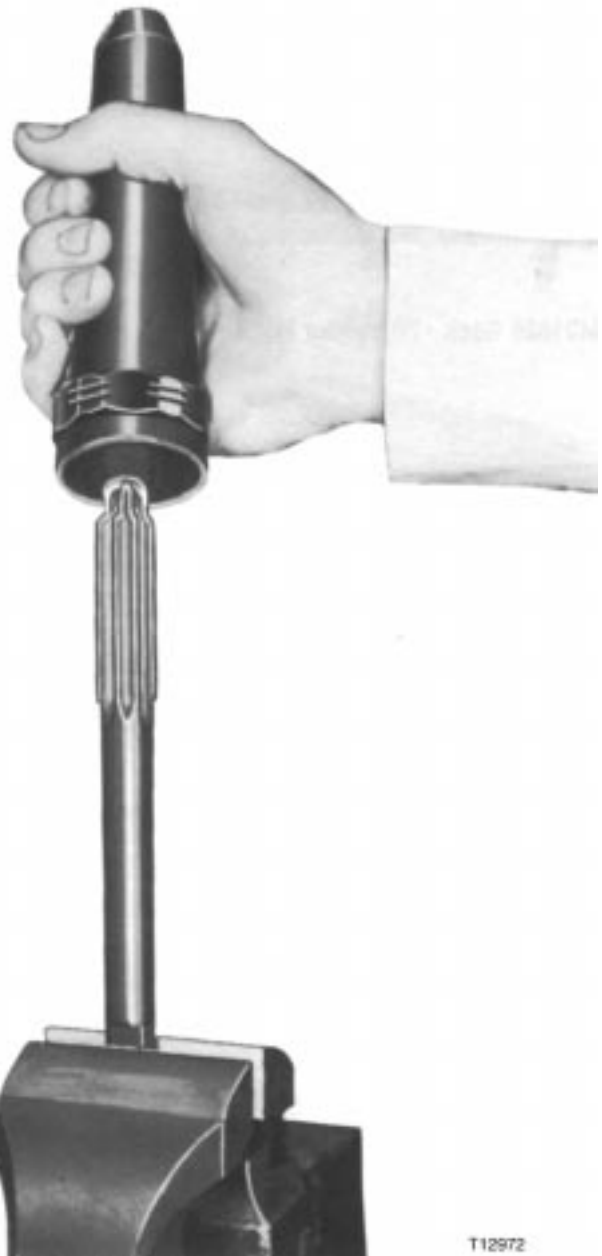
9579235 Arbor - For removal of rocker arm follower bushing in 9571597 rocker arm roller assembly. All 710 Engines. (not shown)

9579236 Sleeve

9579237 Arbor - For installation/removal of "Y" Groove rocker arm bushing. All engines, including older style bushings.

9579238 Sleeve

RECOMMENDED SERVICE TOOLS



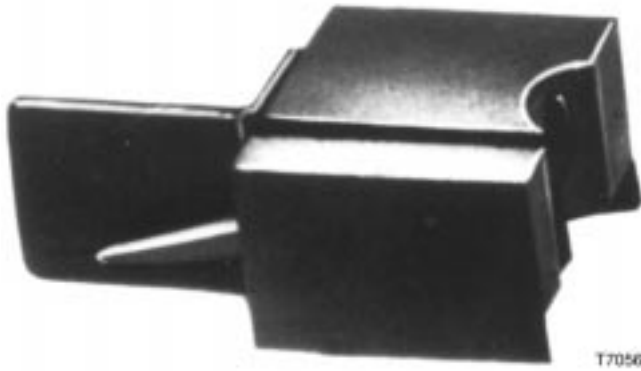
8291642 Reamer - Injector Nut - Needle Valve Injectors

(not shown)

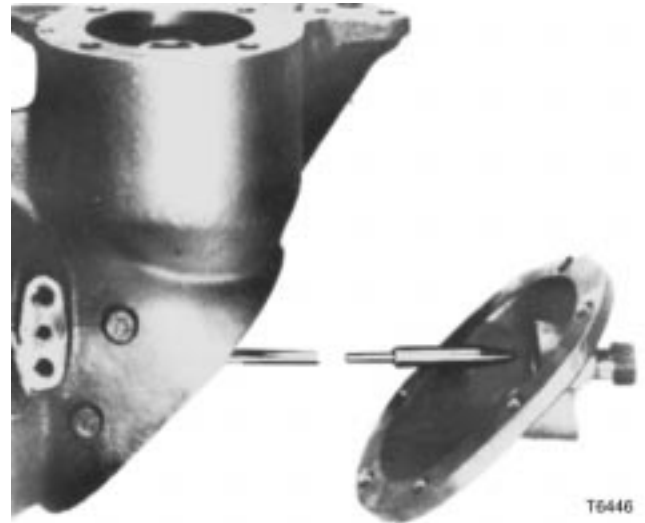
9555276 Socket - 710 Injector Nut

9555886 Wrench - Injector Wrench assembly for loosening Nut on 710 Engines

ENGINE - Governor



8062916 Gauge - Pilot Valve - Early style SI Governors
567A and B Engines with Load Regulator Pilot Valve not incorporated in Governor



8062027 Tool - Tachometer Drive Oil Seal installing - 567 Engines and SI Governor



8227463 Controller - Engine speed, 64 volt - SI or PG Governors



8210256 Adapter - Controller to Governor (8PT to 12 PT)
- C Engine Governors

8210938 Adapter - Controller to Governor, (12 PT to 8 PT) replacing 567B with 567C Engine

8469430 Adapter - Controller to Governor (16 PT to 12 PT)

8469431 Adapter - Controller to Governor (12 PT to 16 PT)



8330230 Tail Rod Jack - SI, PG Governors



8243093 Inserter - Oil Seal - UG8 Governor Industrial

ENGINE - Governor



T18441

8432485 Jack - Governor Injector Link Setting - PG Rail and Marine Governors



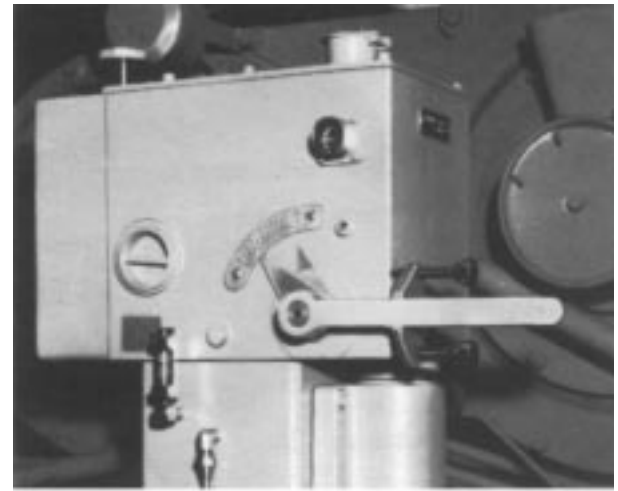
T6200

8061015 Installer - Governor Drive Shaft Snap Ring - SI Governor



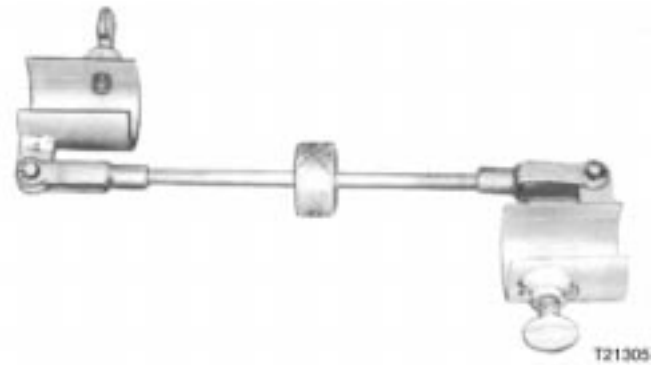
T6212

8084868 Guide - Governor Drive Shaft Oil Seal - SI Governors



T14682

8295586 Jack - Governor Injector Control Linkage setting - Industrial Engines with LSG, EGB Governors and MP36, MP45 Units with (PG PH) Governors



T21305



T18043

8259734 Jack - Injector Linkage Setting - UG8 and Marquette Governors

(not shown)

8239526 Compressor - Injector Linkage Actuator Spring - Dual Fuel

8208889 Drive Shaft Seal Removing and Installing Tool - PG Governors

ENGINE - Governor



8212484 Box-Socket-Wrench - Half Moon 5/8" x 3/4".
(Useful in removing two rear nuts retaining Governor.)



8113925 Jack Nut - Speeder (used when making adjustments to the Governor Pilot Valve) SI and PG Electro Hydraulic Governors



8208398 Wrench - Shutdown nut adjust - SI and PG Governors

(not shown)

8237117 Pliers - No. 1 Internal Retaining Ring - PG Governors

8237118 Pliers - No. 3 Internal Snap Ring - PG Governors



40034176 Governor Housing Wrench - 3/4" opening for use on Housing Bolts



9546319 Wrench - F40PH Locomotives only (Skinner Shutdown Solenoid Valve Body) - This tool is required when removing and/or replacing the Valve Plunger and Plunger Spring.



8228031 Pliers - External Snap Ring, Drive Shaft Snap Ring - PG Governors



8208890 Ball Arm - Centering Tool - PG and SI Governors

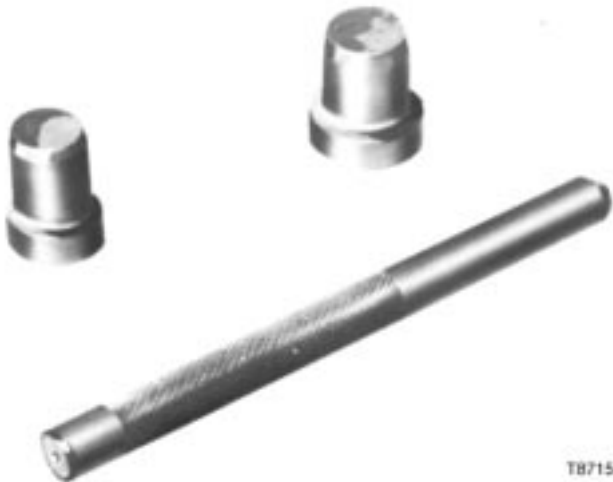
8209807 Ball Arm - Bearing removing and installation tool - PG Governors (not shown)



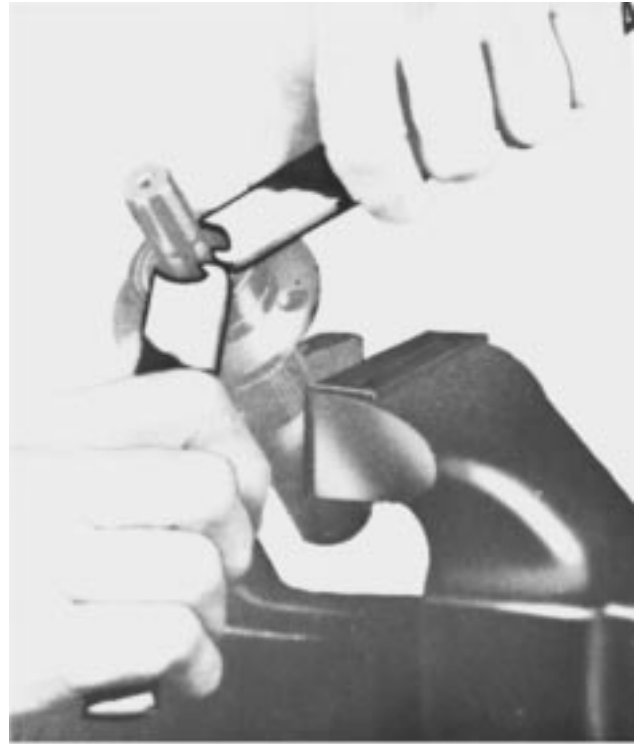
8225660 Remover - Rotary Shaft Oil Seal - Rotary Shaft Governors



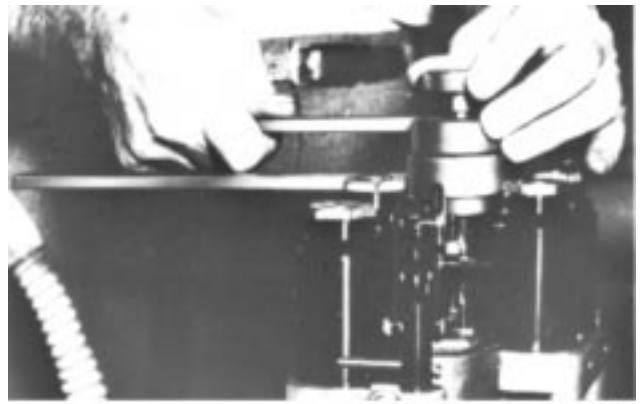
8225659 Rod - Rotary Shaft Oil Seal Driving - Rotary Shaft Governors



8225658 Installer - Remover - Rotary Shaft Bearing - Rotary Shaft Governors



8055831 Remover - Drive Shaft Snap Ring - SI Governors



8343447 Wrench - Engine Speed adjusting (1" Nut Socket) SI or PG Governors

8174868 Wrench - Engine Speed adjusting (1-1/16" Nut Socket) SI or PG Governor

Section 2: Electrical



T171B2

8097939 Shackle Base - Generator - Use with 8249739, Shackle Lifting shown in Engine Tool Section (For D12, 15, 22, 25, and 32 Generators)

272563 Bolt - (4 required per base)

8072352 Shackle -All "AR" Machines



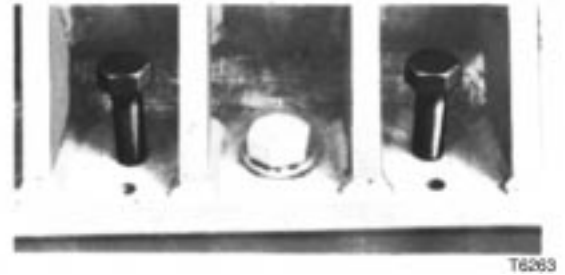
T6299A

8060275 Guide - Armature Bearing Alignment - D4, 8, 15 and 25 Generators and all "AR" Machines

(not shown)

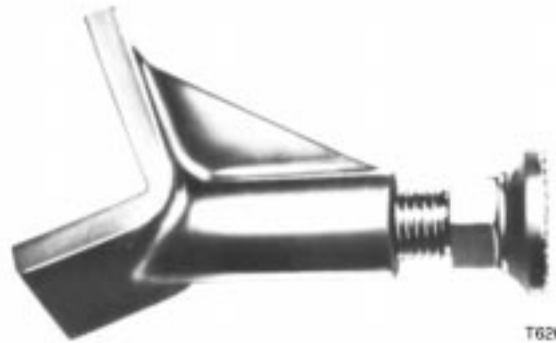
8215173 Bolt - Jacking - Coupling Disc removal - D4 and 8 Generators

8227001 Gauge - Depth - Generators with D14 and 16 Alternators



T6263

8164036 Bolt - Generator Alignment - All Generators



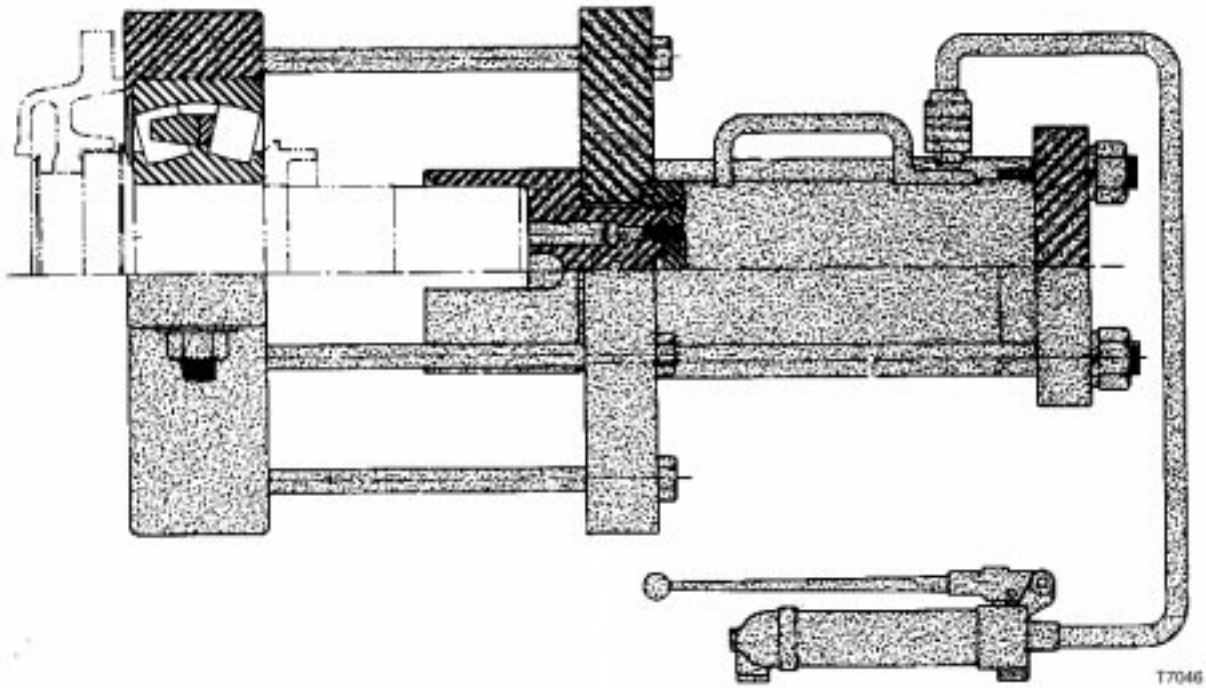
T6261

8052977 Jack - Generator Align - D4, 8, 15, 25 and 32 Generators



T19819

8159227 Guide - Armature Bearing Alignment - D12, 22, and 32 Generators

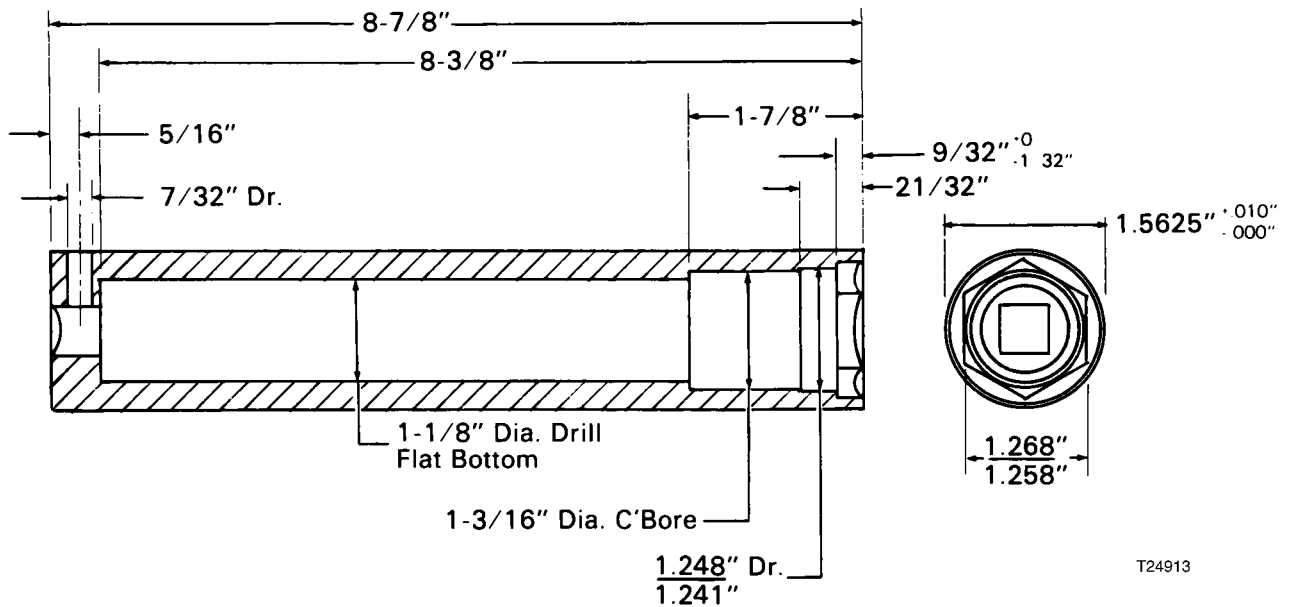


8213623 Puller - Hydraulic - D15 and 25 Main Generators Bearing Kit - Export

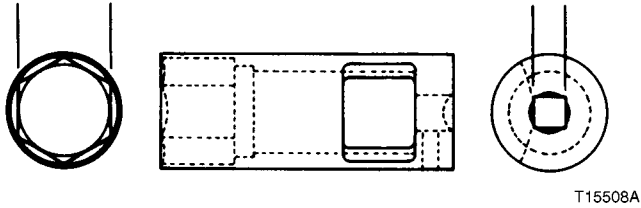
8173948 Puller Kit - Hydraulic Main Generator Bearing Kit - D4, 12, 15, 22, 25 and 32 Generators

8217712 Puller - Hydraulic - D12, 22, and 32 Main Generators Bearing Kit - Export

8302969 Hand Pump



40001415 Socket - Diode removing Battery Charging Rectifiers



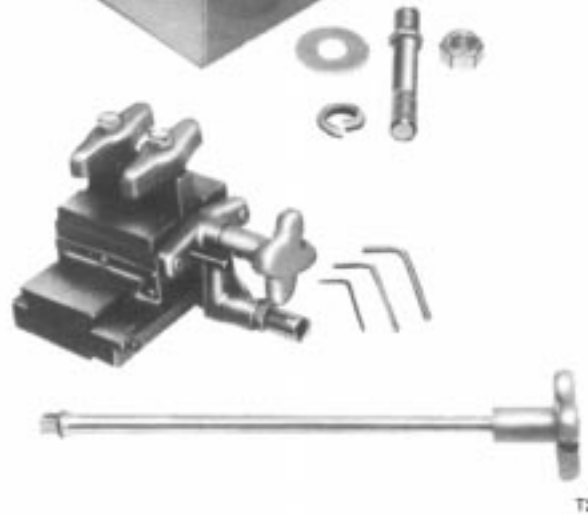
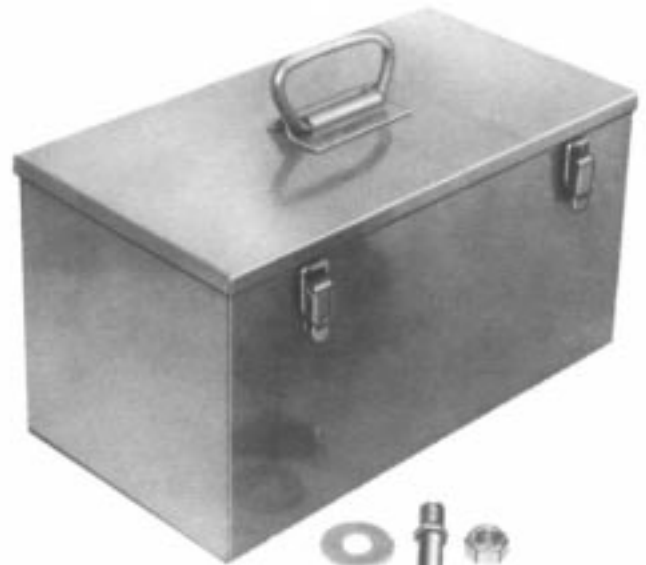
8361524 Socket - Diode removing - AR6, 7, 10, 11, 12, 15, 16 and 17



8159226 Stud - Armature Bearing Align - D12, 15, 22, 25, and 32 Generators



8498344 Tool - Slotted elongated Socket, for Lock Wheel magnetic pick up



8204166 Grinder - Commutator 4" - Traction Motor

(Export)

8208358 Stud - Mounting

8208360 Case - Carrying

123305 Nut - Mounting

779430 Wrench - Allen 3/32"

779432 Wrench - Allen 5/32"

779433 Wrench - Allen 3/16"

Handle - Assembly

Grinder - 4"

Spring - Washer

(Used on D19, 29, 31, 36 and 43 Traction Motors)

(not shown)

8204168 Adapter - Commutator Grinder - D19, 29, 31, 36 and 43 Traction Motors (used with 8204166) (see Page 2-3)

8211051 Bar - Alignment (use with 8204166 and Adapter 8204168) - D19, 29, 31, 36 and 43 Traction Motors

ELECTRICAL



8219264 Grinder - Alternator Slip Ring - All Models of "A" and "AR" Alternators includes
Spring - Washer

8208360 Case - Carrying

271548 Mounting Screw
Grinder Assembly

8219265 Adapter - Grinder Mounting (use with 8219264)
A5, 5A, 7, 11, 20 (see Page 2-2) (not shown)



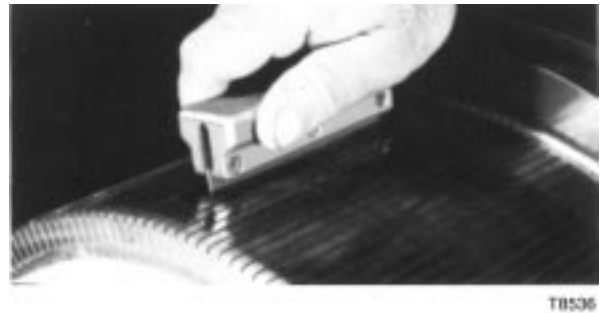
8364940 Adapter - Alternator Slip Rings AR5, 5A, & 10 Alternators with small bearings only (use with 8219264 Grinder)

9506268 Adapter - Alternator Slip Pin AR5B, 6, 7, 10, 11, 12, 15, 16 and 17 Alternators with large bearings only (use with 8219264 Grinder)

8210141 Bar - Alignment for 8355891 Grinder and Adapters 8354239, 8354226 Domestic Traction Motors (not shown)



8217141 File Assembly - All Commutator Slots
8217142 File - Replacement



8238905 File Assembly - Commutator Slot - D15 and 25 Generators in Frame and all Traction Motor Commutators out of Frame
8217142 File - Replacement



8354239 Adapter - Commutator Grinder - Brush Holder Mount - All D77/87 Type Traction Motors



-
- 8355891 Grinder** - All D.C. Generators and D77/87 Type Traction Motor Commutators
 - 40012698 Socket**
 - 40012697 Crank**
 - 40012696 Clamp**
 - 40012717 Gear**
 - 8208360 Case** - Carrying
 - 779430 Wrench** - Allen 3/32"
 - Wrench** - Allen 7/64"
 - 779432 Wrench** - Allen 5/32"
 - 779433 Wrench** - Allen 3/16"
 - Grinder** - 6" with Handles



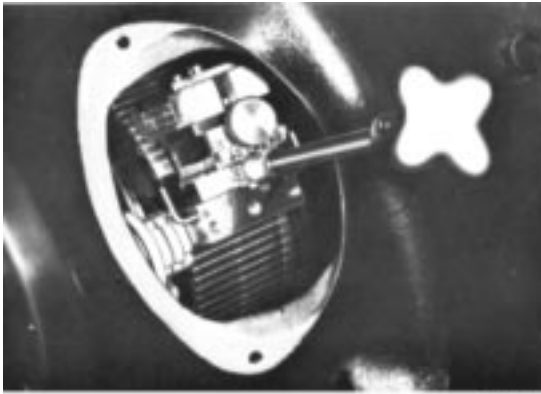
-
- 8359253 Adapter** - Commutator Grinder (use with 8355891) - D8 Generator



-
- 8354226 Adapter** - Supporting - Commutator Grinder - All D77/87 Traction Motors Bottom Opening (used with 8355891) while Traction Motors are still mounted on Locomotive



-
- 8195928 Adapter** - Commutator Grinder (use with 8355891) - D12, 15, 22, 25, 32



T8208



T21354

8085256 Saw - 7/8" x .032" x 5/16" (used to undercut Traction Motor Commutator Slots)



T21353

8085255 Saw - 7/8" x .030" x 5/16" (used to undercut Generator Commutator Slots)



T9088

8260844 Grinder Assembly - Auxiliary Generator Commutator 10 and 18 kW Generators

779429 Wrench - Allen - 5/64" hex.

779431 Wrench - Allen - 1/8" hex.

779432 Wrench - Allen - 5/32" hex. Case - Carrying

779433 Wrench - Allen - 3/16" hex.

(not shown)

8279712 Kit - Grinder - Alternator Slip Ring CA5, 6, 7, D14, 16, 18, HE3, 4 and 5 Alternators

8280596 Driver - Flex 1/4" square drive

8204047 Extension - Flexible 1/4" square drive

Use with Grinder 8260844



T18596

8204167 Stone - Finish Grind - 1" x 1-1/2" x 5" - D4, 8, and 15 Generators all Traction Motors (2 required) - Used with Grinder 8219264

8496921 Stone - Medium - 1" x 1-1/2" x 5" - Used with Grinder 8219264

8260375 Stone - Coarse Grinding - 1" x 1-1/2" x 5" alt. Slip Ring - A11, A20, etc. - Used with grinder 8219264

8209151 Stone - Coarse - 1/2" x 1/2" x 3"

8208824 Stone - Medium - 1/2" x 1/2" x 3"

8209152 Stone - Finish - 1/2" x 1/2" x 3" (Used with 8176863 Grinder - no longer available)

ELECTRICAL



T21327

8260843 Stone - Finish Grind (2 required) - Auxiliary Generator and CA5, 6, 7, D14, 16, 18 HE3, 4 and 5 Slip Ring

8201791 Stone Finish Grind - 1" x 2" x 5" - D12, 22, and 32 Generators (2 required) Used with 8355891 Grinder (not shown)



T6529

8149435 Abrasive - Flexible Cleaning Stone (Used to clean and polish electrical current carrying surfaces without removing an excess)



T7050

8204957 Seater - Commutator Brush - All Commutators



T21321

8084164 Holder - Honing Stone Master Set - 4 pieces 8" to 11.5" - Used for Generator Bearing Housings D4, D8

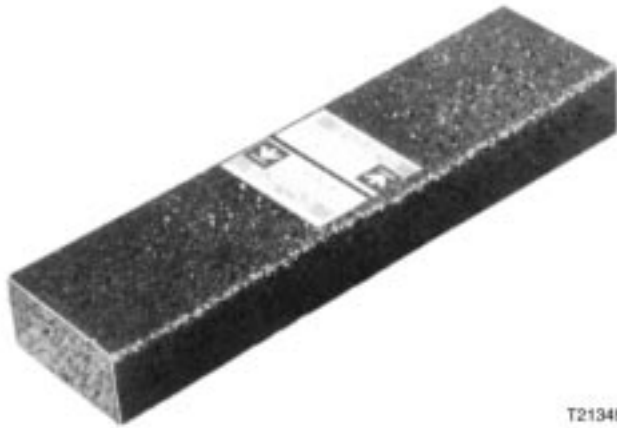
8098075 Holder - Honing Master Set - 4 pieces 6" x 9" Liners - Used with 8491575 Hone Set (not shown)



T21314

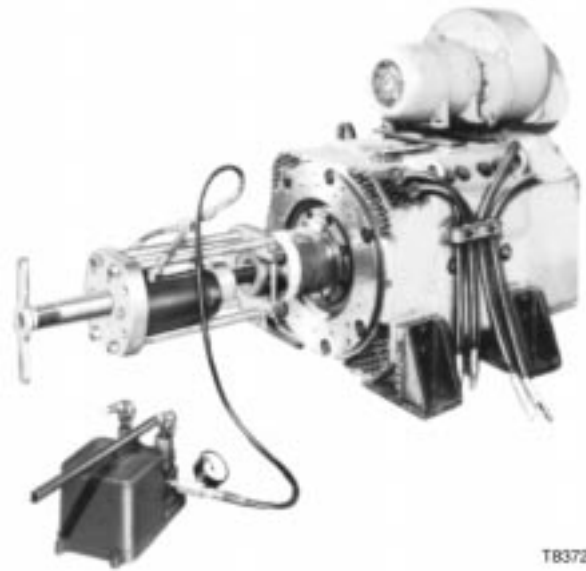
8141619 Stones - Honing Set finishing all D Generator Bearing Housings

ELECTRICAL



T21340

8085259 Resurfacing Stone - Commutator - medium finish grade - 2" x 1" x 8" - Used with Auxiliary Generator Grinder 8260844



T8372

8239217 Puller - Pinion - Hydraulic Kit - Drive Flange

8224242 Adapter

8228886 Adapter

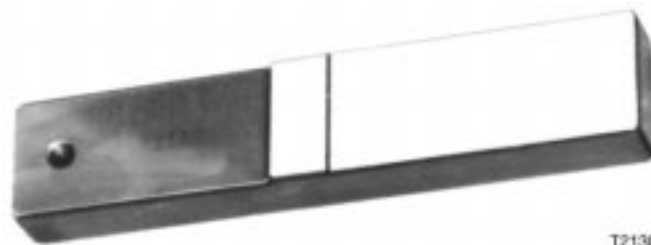
138463 Screw



T19594

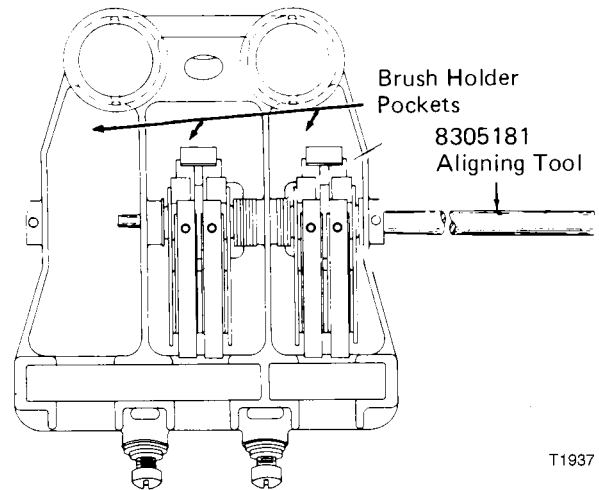
8270339 Knife - Burring - Commutator Bar - all Generators and Traction Motors

8270341 Blade - Burring Knife



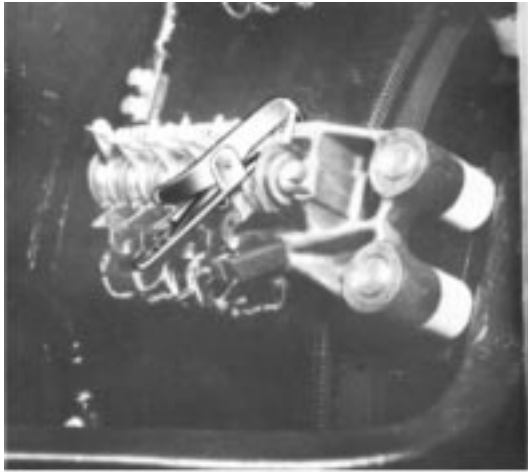
T21309

8259133 Gauge - Brush Slot - All EMD Generators and Traction Motors (used to check wear on Brush Slots [Go or No Go] for reworking Brush Holders) "No Go 635 — Go 626"



T1937

8305181 Tool - Brush Holder Spring Cell Aligning - For all 3 and 4 cell Traction Motor Brush Holders



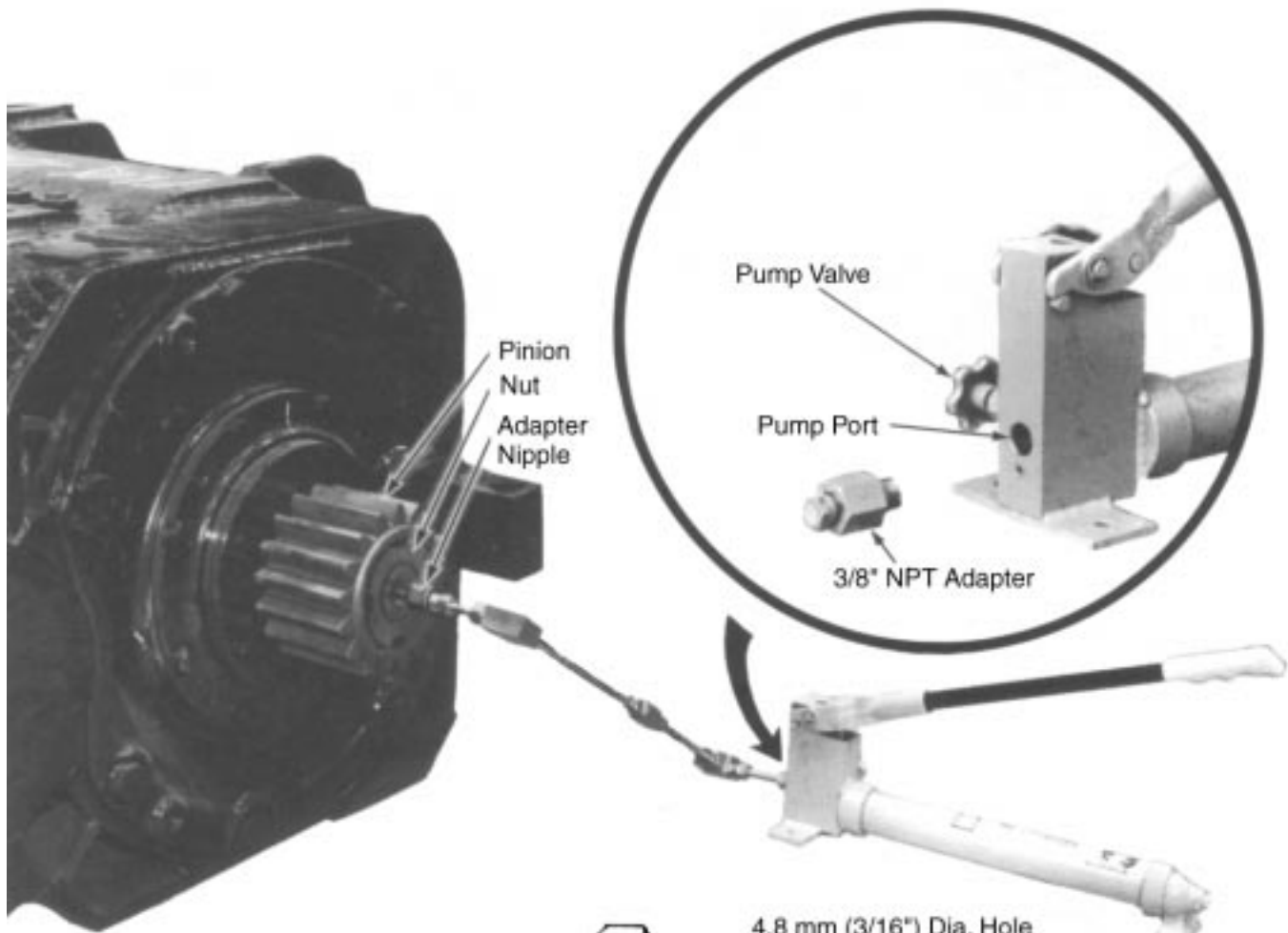
T6273

8140868 Lifter - Commutator Brush Spring Lever - D12,
15, 22, 25 Generator



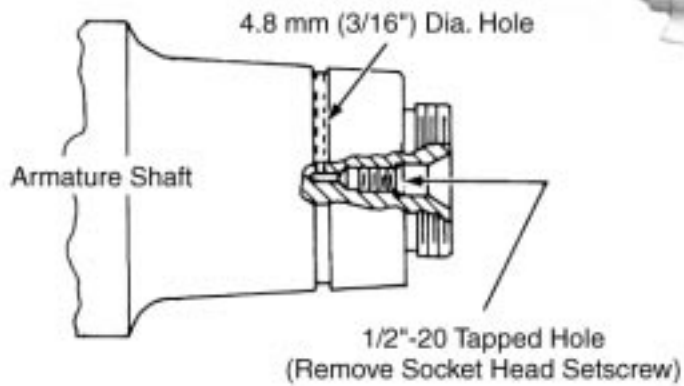
T6274

8140869 Lifter - Traction Motor Brush Springs (used with
Traction Motor Brush Holder 8300034)



NOTE

1. Remove 3/8" NPT adapter from pump port and connect gland nut directly to pump port.
2. Before connecting adapter nipple to shaft, loosen nut approximately one turn.



T28235

9533321 Remover - Pinion or Flange - For all Traction Motors and Motor/Generators having Armature Shafts machined for hydraulic float off. (Circumferential groove on taper connected by drilled passages to the 1/2"-20 tapped hole in the end of the Armature)

8302969 Hydraulic Pump

9533322 Gland Nut with Sleeve

9533323 Tube

9533324 Tube

9533325 Tube

9533326 Elbow

9533327 Coupling

9533328 Adapter-Nipple - 1/2"-20

8246430 Hydraulic Oil - 1 gallon

9566297 Adapter-Nipple - 3/8"-24

ELECTRICAL



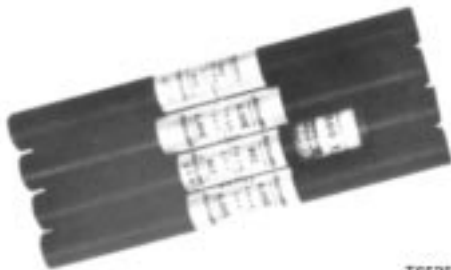
T19606

8303020 Retaining Safety Nut - Used with Hydraulic Float Off



T6485

8415805 Scale - Brush Tension Testing, 0-15 pound range by 4 ounce increments



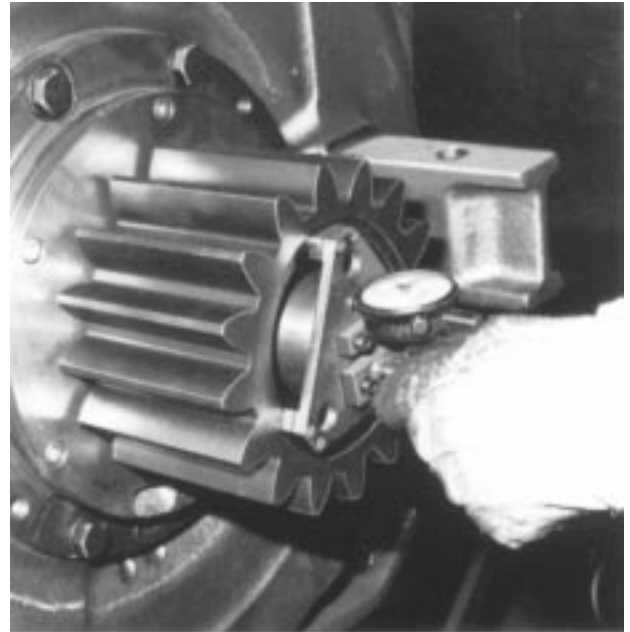
T6535

8172031 Indicator - Tempilstik Heat - 300 Degrees F. - Pinion Gear

8172032 Indicator - Tempilstik Heat - 325 Degrees F. - Pinion Gear

8172033 Indicator - Tempilstik Heat - 338 Degrees F. - Pinion Gear

8172034 Indicator - Tempilstik Heat - 250 Degrees F. - Pinion Gear



T27051

9539037 Gauge - Pinion Advance - All Traction Motors
9539031 Indicator - Dial - All Traction Motors



T6284

8041446 Heater - Induction Type Pinion - All Traction Motor Pinions

8075956 Coil - Induction Heater - All Traction Motors

8097840 Bar - Top Cross - All Traction Motors



T6317

8050721 Die - Traction Motor Armature Shaft rethreading 2-3/4" - 8 - Traction Motors (used with 8050722 Holder)



T6322



T12650

8127528 Handle - Traction Motor Pinion Nut Sliding T - 1" square drive all Traction Motors

8127529 Wrench - Traction Motor Pinion Nut - All Traction Motors



T28302

8050722 Holder - Die - Includes four handles - Traction Motors (used with 8050721)



T8542

8239753 Tap Assembly - Pinion Thread - Traction Motor Pinions

8245258 Tap - Thread - Replacements

8245259 Plate - Tap Holder - Replacement

9431469 Screw - 5/16" - 18 Socket Head Cap (4 required) Replacement

Pinions

NO. OF TEETH	PINION PART NUMBER	GAUGE PART NO.
12	8168517/8452310 (Integral w/Shaft)	8362636
13	8428702	9098509
14	8179135/8326123 8452311	8361636
15	8452312/9096751 8459295/8458508	8344485
16	8452313/8210792 8341961	8347119
17	8452314/8206504	8347120
17	9315722	9526379
18	8452315	8375380
18	9332201	9526378
19	9326333	8370612
19	9332202	9526377
20	9326334	8485575
20	9332203	9526376
21	9326335	8485576
22	9326336	8485577
25	9326337	8485578

Gear

NO. OF TEETH	GEAR PART NUMBER	GAUGE PART NO.
70	9315723 & 9520045	9526383
69	9332207 & 9520044	9526382
67	9332206 & 9520043	9526381
66	9332205 & 9520042	9526380
65	8178812	8362635
64	8428701	9098508
63	8200600 & 8326122 9081796	8361635
62	8109579, 8459296 & 9318170	9523997
61	8184341, 8210783 & 8453042	9523996
60	8179295 & 8206505	9523995
59	8184333	8375379
58	8184378	8370613
57	8184325	9321569
57	8341962, 8368989 & 8491290	8491552

Note: -Use with .010" wire.



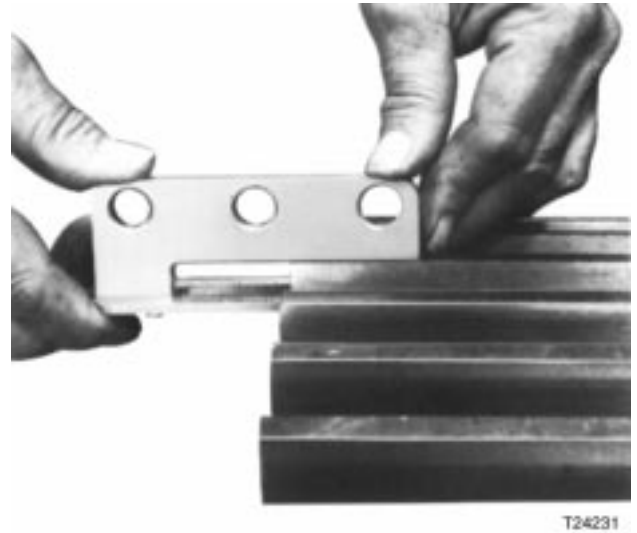
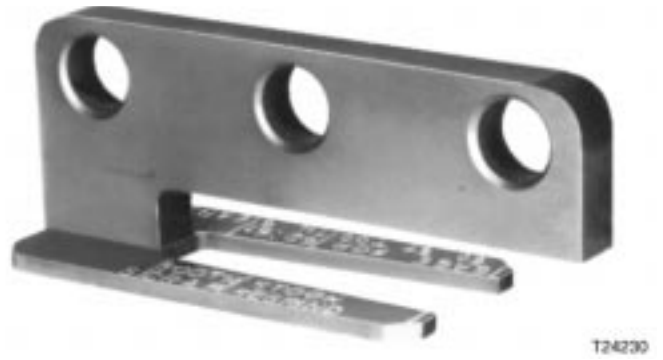
8198632 Dispenser - Lube Oil - Support Bearing - All Model Locomotives



8250241 Remover - Installer - Traction Motor Gear Case - Filler Cap



40034745 Crowfoot Flare Nut Socket - This tool designed to apply Traction Motor Oil Filler Plug

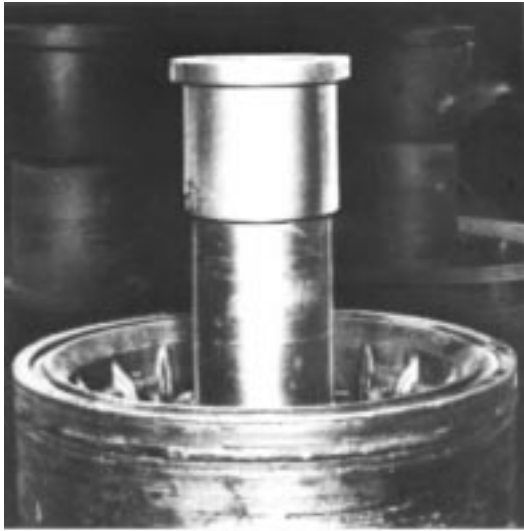


9512412 Gauge - Axle Gear Wear

This gauge has been designed to quickly check a gear tooth only on 62, 61, 60 and 57 tooth gears to determine if there is sufficient stock on the tooth for reprofiling. Can be used on 66, 67, 69 and 70 tooth gears on 50/60 Series.



40034178 Socket - Used for removing bolts on aluminum end Bell Unit of Traction Motor Armatures



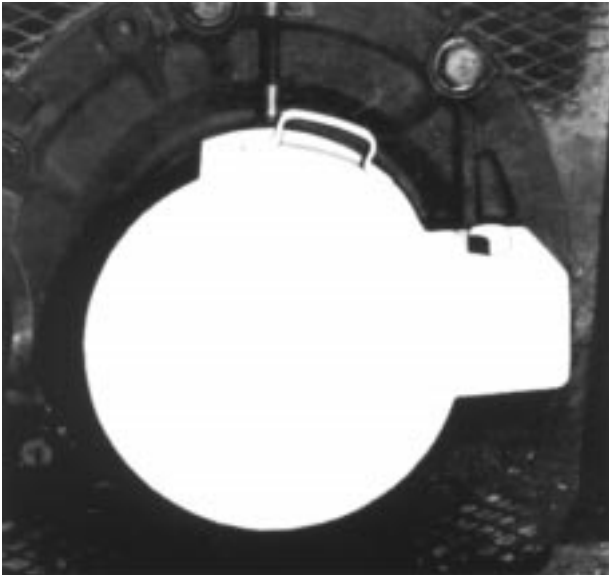
T6335

8158748 Protector - Pinion End Shaft - Traction Motors



T6297

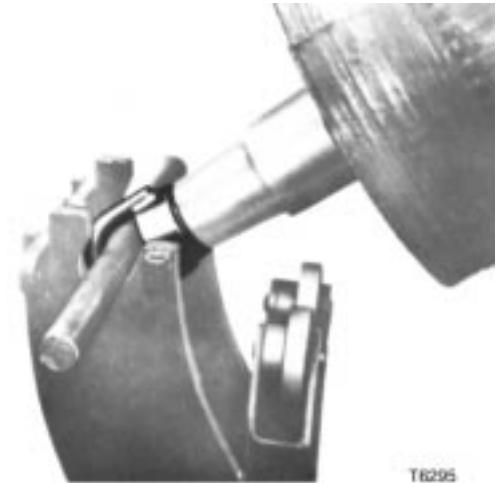
8067147 Plate - Armature Turning - Domestic Traction Motors



T6320

8054871 Protector - Traction Motor Pinion - All Domestic Motors

8206970 Protector - Traction Motor Pinion - All Traction Motors - Export (not shown)



T6295

8067122 Eye - Lifting - Pinion End - Other than 12 tooth (for 12 tooth use 8065527)



T8579

8174221 Eye - Lifting - Commutator End - D77 and 87 - 3.955 I.D. Traction Motor Armature

(not shown)

8219763 Eye - Lifting - Commutator End - D19, 29, 31, 36 and 43 Traction Motors

8315525 Eye - Lifting - Commutator End - SKF Bearings - Export

8065527 Clamp - Armature Lifting - (Pinion End) D7E, 17E, 27E, 37E, 47E, 57E, 67E, and 77E Traction Motors



T8421

8228024 Mask - Grease - Commutator End Bearing Cap - B and E and Industrial Motors



T19512

8252767 Mask - Grease - Commutator End Bearing Cover - With insert (used on all motors equipped with Commutator End Bearing Cover 8248991)



T19590

8261579 Mask - Grease - Pinion End Cap - D19, 29, 31 and 36



T19511

8228025 Mask - Grease - Pinion End Bearing Cap and Cover - B Series Motors (old seal arrangement until approximately 1971) and Industrial Motors

ELECTRICAL

(not shown)

8238744 Mask - Grease - Pinion End Cap and Cover - E Series Motors

8276639 Mask - Grease - Pinion End Bearing Cover - D19, 29, 31 and 36

8276636 Mask - Grease - Commutator End Bearing Cap - D19, 29, 31 and 36

8261578 Mask - Grease - Commutator End Bearing Housing - D19, 29, 31 and 36

8276640 Mask - Grease - Main Generator Bearing Cap and Cover - D12, 22, and 32

8278375 Mask - Grease - Main Generator Bearing Cap and Cover - D4 and 8

8276637 Mask - Grease - Main Bearing Cap and Cover - D15 and 25 Caps only - A11 and 20

8276638 Mask - Grease - Alternator Bearing Cover - A5, 5A, 7, 11 and 20

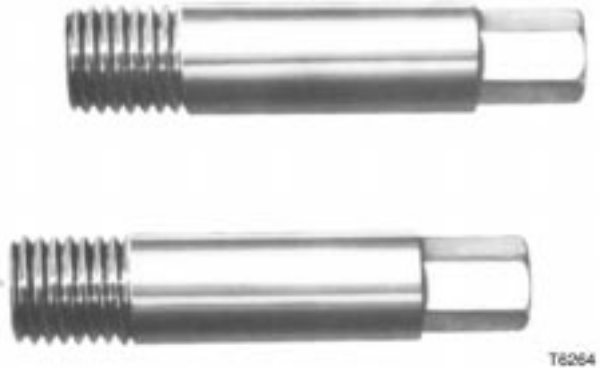
9519023 Mask - Grease - AR6, 7, 10, 11, 12, 15, 16 and 17 - Larger Bearing Cap and Cover



8155976 Stud - Traction Motor Pinion End Bearing Cap locating D7, 75, 77, 78 and 87 Traction Motors



8155977 Stud - Locating - Traction Motor Commutator End Housing D7, 75, 77, 78 and 87 Traction Motors



8155975 Stud - Locating - Traction Motor Commutator End Bearing Cap D7, 75, 77, 78 and 87 Traction Motors

(not shown)

9548311 Tester - Megohm - 0-200 Megohms at 500 volts
DC - 0 to 20,000 ohms, 0 to 150, 300, 750, 1500 volts
AC. 0 to 150, 300, 750, 1500 volts DC - Battery Powered



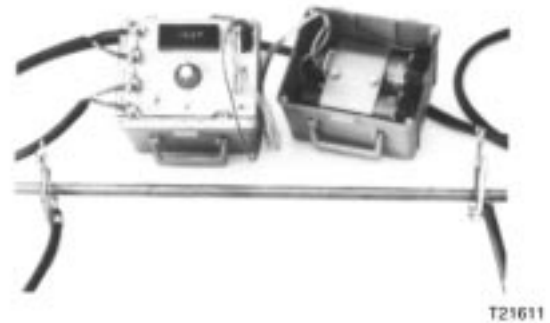
8174880 Tester - Insulation Resistance - Megger 0-2000 megohms, 1000 volts - 0-1000 megohms, 500 volts - 0-500 megohms, 250 volts - Generator Type
8174878 Lead - Heavy Duty - Pair 12 ft. long
8174879 Case - Carrying



8071692 Tester - Midget Megger - 0-100 megohms - 500 volts DC



9322571 Ohmmeter - Digital Low Resistance - Kit includes the following:
9322574 Ohmmeter - Range 0 to 19.99 ohms in 5 ranges - 0 to 1.999 milliohms lowest range - four digit display
9322575 Battery Charger - With Batteries
9322576 Leads - Six foot Helical Spring Point
9322577 Batteries - For Ohmmeter (used in 9322574 meter only) (Battery Charger not shown)



9322572 Ohmmeter - Digital Low Resistance - Kit includes the following:
9322578 Ohmmeter - Range 0 to 19.99 ohms in 5 ranges - 0 to 1.999 milliohms lowest range - four digit display
9322579 Battery Pack - Molded Case Batteries
 2 dry cell 4 FH
 4 dry cell "D" Flashlight Batteries
9322576 Leads - Six foot helical Spring Point
 (not shown)
9322573 Ohmmeter - Digital Low Resistance - Kit includes the following:
9322578 Ohmmeter - Range 0 to 19.99 ohms in 5 ranges - 0 - 1.999 milliohms lowest range - four digit display
9322580 Power Unit - AC - DC*
9322576 Leads - Six foot helical Spring Point
 *Power Units available in 120/60, 220/50 or 240/50
8255634 Bridge - Wheatstone - 1, 10, 100, 1,000, 10,000, or 100,000 ohms



8276478 Meter - Volt ohm milliammeter - Range-Volts DC 0-2.5 - 10 - 50 - 250 - 1000 - 5000 AC 0-3 - 10 - 50 - 250 - 1000 - 5000 resistance - 1 to 100 megohms in four ranges DC milliamperes - 0 - 10 - 100 - 1000 at 250 millivolts

Complete with Leads, Alligator Clips, Batteries, Instruction Manual and Carrying Case



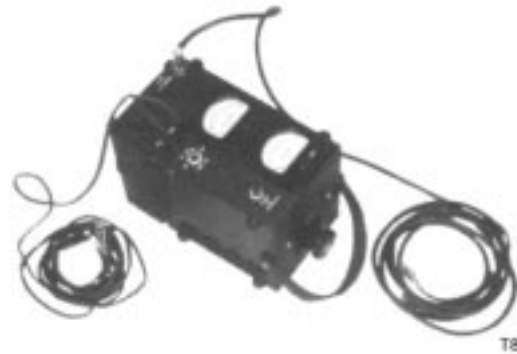
8472576 Digital Multi-Meter - Voltage 2000V peak Ranges:
(AC and DC Volts - 200 MV, 2 Volt, 20 Volts, 200 Volts, 2KV)
(AC and DC Current - 2 MA, 20 MA, 200 MA, 2 Ampere)
(Ohms - 200 Ohm, 2 K Ohm, 20 K Ohm, 200 K Ohm, 2 M Ohm, 20 M Ohm)
Includes Banana Plugs, Internal Battery Pack and AC Line Operation



8209343 Voltmeter - Alternating current - Less leads 600/300/150 volts

8212485 Case - Carrying - For 8209343 Voltmeter

8255635 Clamp On Type Ammeter - 0-50, 150, 400 amperes AC, DC; 0-1000 amperes DC



8246474 Tester - 0-1000 milliamperes - Wheel Slip and Ground Relay - Domestic and Export

8276526 Knob - Rheostat

8288045 Switch - 50 milliamperes - 1000 milliamperes

8288046 Button - Push

8288047 Milliammeter - 0-1000 milliamperes

8288048 Milliammeter - 0-50 milliamperes

8288049 Rheostat - 3500 ohm - Less Knob

8288050 Rheostat - 300 ohm - Less Knob (2 required)

8288051 Resistor - 150 ohm - Less Knob - Set at 120 ohms

8288052 Resistor - 1000 ohm - Less Knob - Set at 800 ohms

8260337 Lead Assembly - Battery

8260338 Lead Assembly - Test

ELECTRICAL



8218499 Meter - 30-150-1500 volts - 75-150 millivolts
30-60-300-600 milliamperes
8190835 Lead - Test - Pair

(not shown)

8070988 Shunt - 10 amperes - 50 millivolt - Shunt Field

8042782 Shunt - 100 amperes - 50 millivolt - Battery
Field

8078329 Shunt - 200 amperes - 50 millivolt - Battery
Charging

8309746 Shunt - 2000 amperes - 50 millivolt (must be
used with 4 Spacers - 8309755) - Used for Transition
and Power Limit settings and Load Testing DC
Generator equipped Locomotives

8351657 Shunt - 4000 amperes - 50 millivolt - Used for
Transition and Power Limit Setting and Load Testing
AR10 Alternator equipped Locomotive

9322324 Shunt - 5000 amperes - 50 millivolt - Used for
Transition and Power Limit Setting and Load Testing
AR11, 15, 16 and 17 Alternator equipped Locomotives

8309755 Spacers - (4 required) - Use with 8309746

8279561 Safety Test Lamp - 8 foot Leads Alligator Clips
64 to 125 AC-DC

40031139 Bulb



8233558 Dynamotor - Output - Variable-1200 volts - 6
amps DC - Input 64-76 volts DC

8288053 Coil Assembly - Field

8288054 Armature Assembly

ELECTRICAL



8212404 Tester A.C. - Hi-Pot, 115 volts Model 445, 50-60 cycles single phase kit - 3.6 KVA

8212405 Tester A.C. - Hi-Pot, 220 volts Model 446, 50-60 cycles single phase kit - 3.6 KVA

9519497 Tester A.C. - Hi-Pot, 440 volts Model 447, 50-60 cycles single phase kit - 3.6 KVA

8324253 Tester A.C. - Hi-Pot, 220 volts Model 464, 50-60 cycles single phase kit- 5 KVA



9540689 Crimper - Used on Module Pins and Receptacles on all "Super Series" Locomotives and all Electric Locomotives



9541547 Extracting Tool - Necessary for the removal of Module Pins and Receptacles on all "50 Series" Locomotives and all Electric Locomotives

9576512 Extracting Tool - Same as 9541547 - For use on all "60 Series" Locomotives



8147749 Stripper - Wire Insulation (used for No. 10 to No. 22 size wires)



8196862 Crimper - Jumper Cable Terminal



8417375 Cable Stripper - Cable 5/16" to 1-1/2" O.D.

8417376 Replacement Blade - (not in 8417375)

ELECTRICAL

NEST	INDENTER	DIE SET	CABLE SIZE
8227321	8159252		225/24 (1/0)
8159249			2695/34 (1/0)
8159251			325/24
8159253			550/24
8399221			776/24
8228346	8159250		1100/24
8159249			19/.0745 (1/0)
8229101			19/.0837 (2/0)
8228348			19/.094 (3/0)
Burndy B31D			250 MCM
8159253			350 MCM
---			400 MCM
		500 MCM	
		8227077	4256/34 (3/0)
		8227078	2107/30 (4/0)
8167953	8167952		1325/24
8159255			1480/24-1600/24
8227079			1925/24
8387503	8387505		750 MCM
8387504		Used on Model MP45	4/0
8387806			500 MCM



8159254 Crimper - Hydraulic foot operated (Crimper does not include nests or indentors)



8281927 Crimper - For Faston Receptacles

40025165 Pin Extractor - For AMP rectangular pins. (not shown)



8211824 Kit - Lug and Connector - Same as 8204704 but without Crimpers



- 8204704 Kit - Crimper - Lug and Connector
- 8159849 Crimper - Pre-Insulated Lugs and Connectors
- 8166676 Crimper - No. 4 Wire Size Lugs and Connectors
- 8159240 Crimper - No. 8 Wire Size Lugs and Connectors
- 8200888 Crimper - No. 6 Wire Size Lugs and Connectors (also includes assorted Lugs and Connectors)



8234387 Tool - Terminal used to crimp No. 10 to No. 22 Size Terminal Lugs, also Cut Wire Sizes No. 10 to No. 22 and Machine Bolts Size No. 4-40, 6-32, 8-32, 10-32, 10-24

8208195 Crimper - Emergency Fuel Cutoff and Horn Cord Lug (used on steel cable) (not shown)



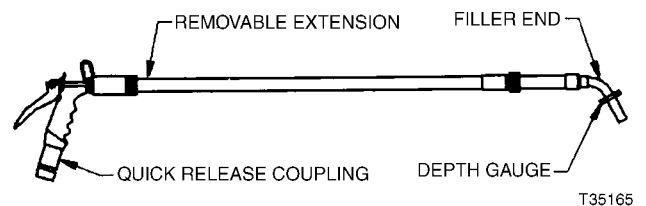
- 8077317 Hydrometer - Battery Testing
- 8140866 Bulb - Rubber
- 8044534 Float - Liquid Level



8178937 Abrasive - Flexible Cleaning Strips



8243341 Breaker - Traction Motor Lead - Clasp half disconnecting Drill Rigs only



40000871 Filler - Battery Cell Exide Batteries only

ELECTRICAL



T15062

8391660 Tool - Wire Binding (utilizes one tape size - 8391661 - and one closure size - 8391662) - to accommodate wire bundling and harnessing of diameters of 1/16" and up



T14470

8391661 Tape - Cable Binding - 25 ft. rolls

8391662 Closures - Tape 1000 (used with Cable Binding Tool 8391660)



T6858

8202702 Expander - Ferrule - Howe Cables (Used to install Ferrule 8195541 in Cable Assembly 8195548.)



T9075

8252809 Scale - Gram - Interlock setting - Through Cable Wheel Slip Relays



T21363

8302030 Pliers - External Snap Ring No. 5 - Magnetic Switch Gear - also Floating Bushing Connecting Rods on 567B Engine



T8752

8064918 Pliers - Thermo Grip - 115 volts 50-60 cycles - for heavy soldering

8236325 Pliers - Thermo Grip - 230 volts 50-60 cycles - for heavy soldering

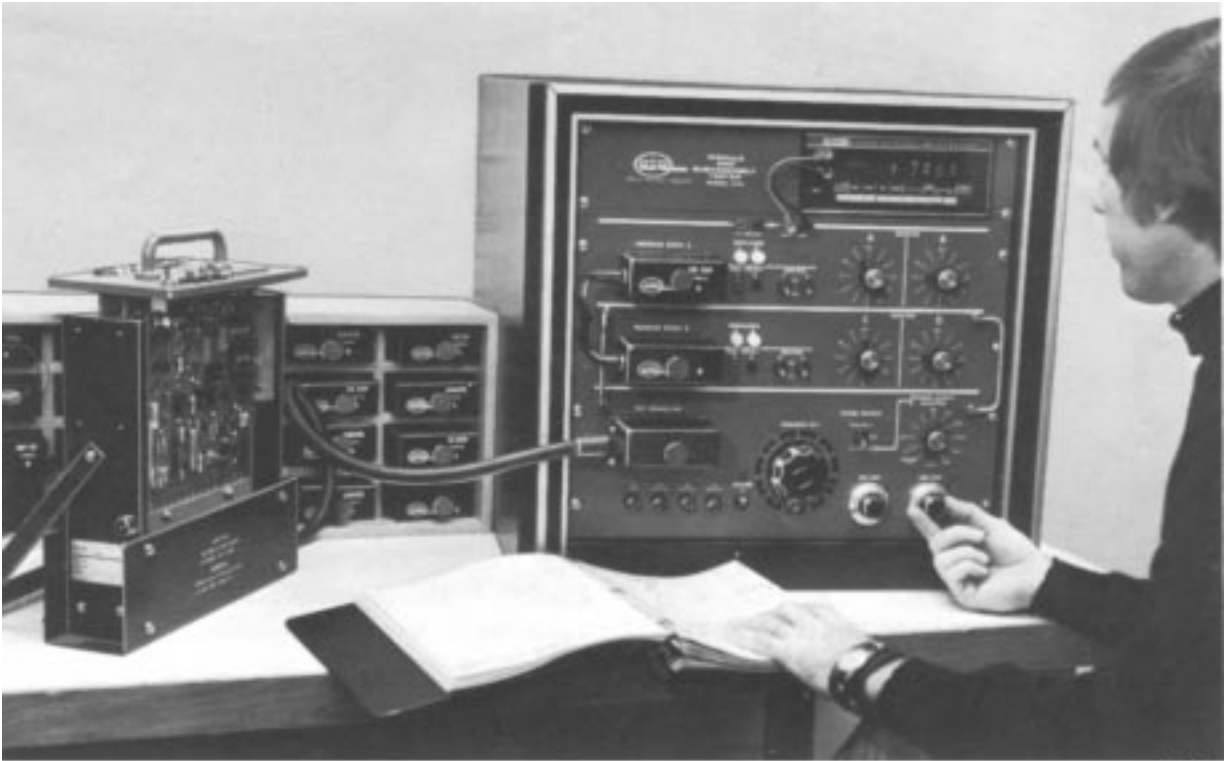
8166464 Electrode - Standard

8166465 Electrode - Flat (optional)

(not shown)

8171256 Pliers - Special U Washer on Contactors

8223143 Pliers - Snap Ring - Cam Switch



T21347

9087559 Tester - Module and Sub-Assembly Tester -
(Operates 115 VAC 50/60 Hz) includes Calibration
Self-Test

NOTE

Does not include programs or program blocks. The
programs and program blocks must be ordered separately
according to the module testing capability desires.

(not shown)

9087560 Tester - Module and Sub-Assembly Tester -
Export Model (Operates on 220 VAC 50/60 Hz)
Includes Calibration Self-Test

NOTE

Does not include programs or program blocks. The
programs and program blocks must be ordered separately
according to the module testing capability desired.

(not shown)

9575502 Anti-Static Bags - 14" x 18"

9575501 Anti-Static Bags - 18" x 18"

40000031 Grounding Wrist Strap

40000012 Anti-Static Bags - 7" x 11"

40036919 Disposable Strap

9576500 Label



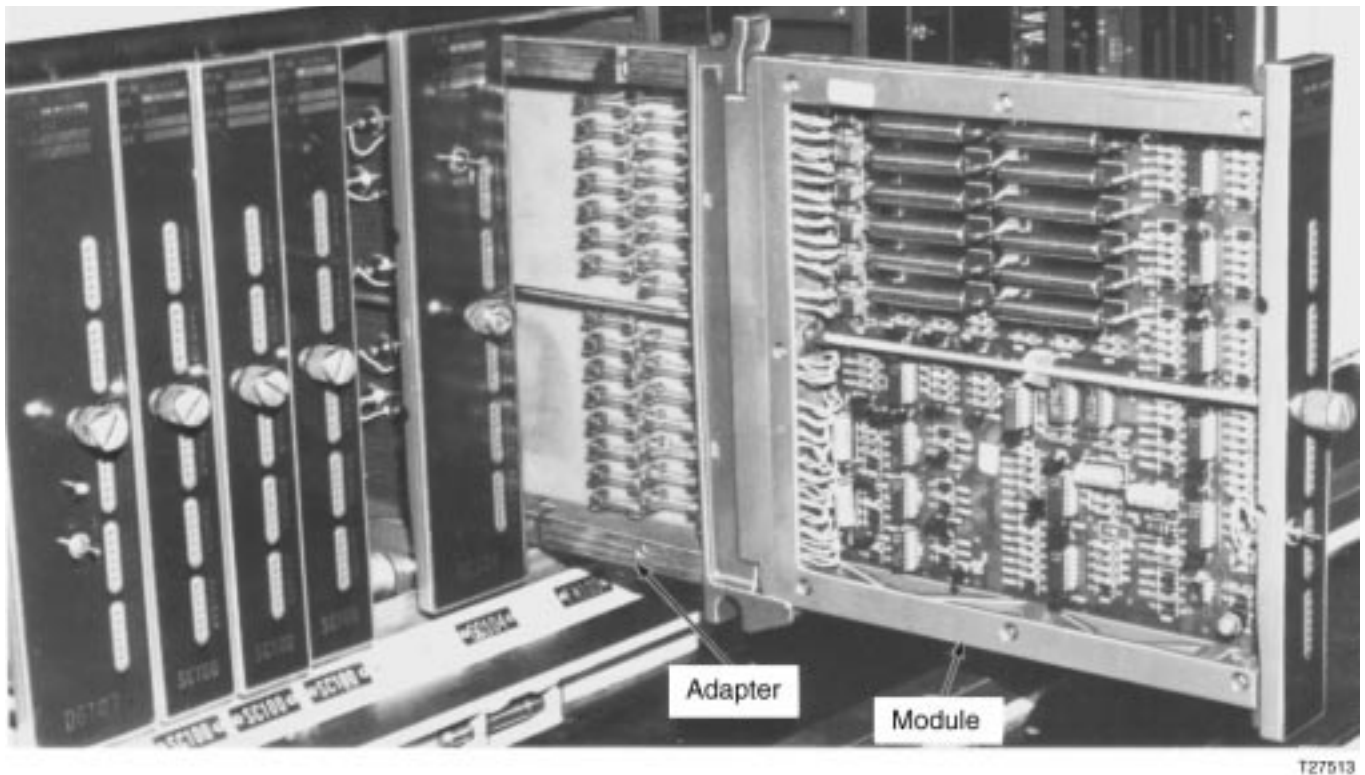
T28304

9543733 Kit - Radar Calibration - Electronically simulates
speed of locomotive (antenna shown applied to face of
radar transceiver)

9543736 Transponder only

9543735 Cable only

9543734 Case



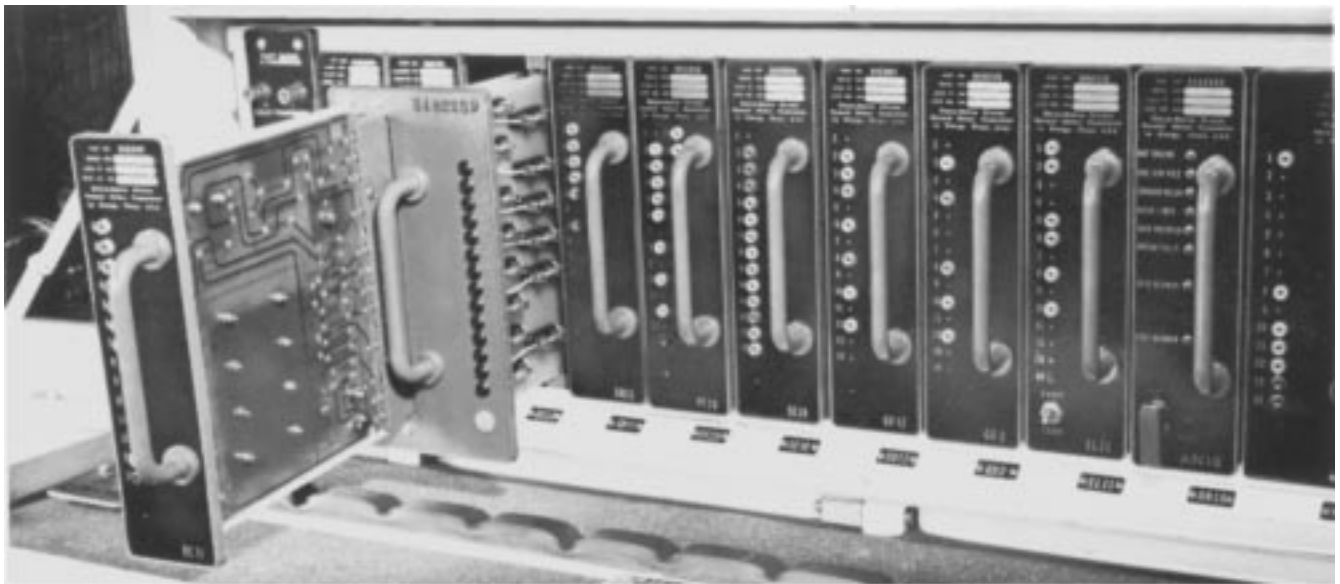
9533912 Extension Board Assembly - Used as an aid in troubleshooting modules on “50 Series” Locomotives

9539635 Fuse

40017825 Extension Board Assembly - “60 Series” - Digital - CPU, MEM, ARC

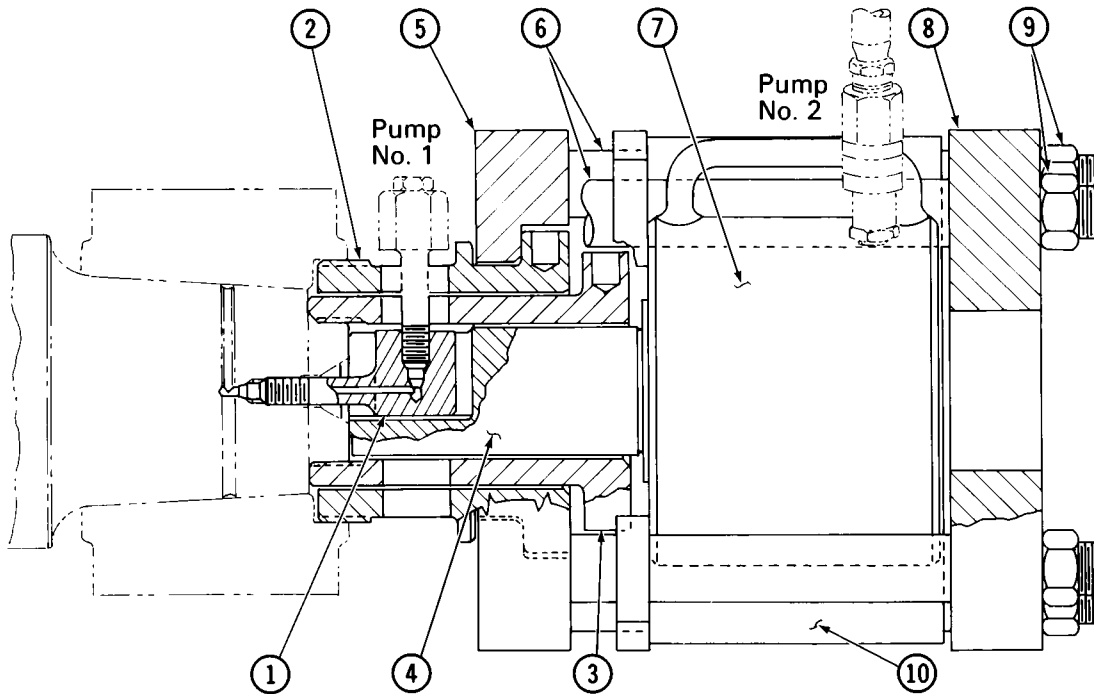
40017828 Extension Board Assembly - “60 Series” - Analog/Digital - IOE, IOL, IOD, FCS, ADP

40017872 Extension Board Assembly - “60 Series” - Analog - FBE, FBL



8482259 Extension Board Assembly - Used as an aid in troubleshooting modules on Dash 2 Locomotives

8415827 Fuse



T28748

9568165 Hydraulic Puller Assembly - Pinion. To remove pinions on D87 and earlier motors

ITEM NO.	.		QTY. REQ
1	9568100	Adapter - Nipple	1
2	9568098	Sleeve - Pinion	1
3	9568101	Sleeve - Shaft	1
4	9568099	Spacer - Thrust	1
5	9568104	Plate - Yoke	1
6	9568097	Spacer - Asm.	4
7	9580138	Hydraulic Cylinder	1
8	9568105	Plate - Ram	1
9	8487866	Nut 1-14 Hex.	4
10	9568106	Plate - Saddle	1

In addition, two independent hydraulic sources are required to operate puller 9568165. Suitable equipment is already available as listed below:

- 9533321 Kit-Pinion Removal** - (40,000 psi)
- 8174285 Hydraulic Pump** - (10,000 psi)
- 9581330 Hose**



T35478



T30230

9572744 Electro-Hydraulic Crimping Tool - Crimping tool assembly - For use in installing crimp type clasp connectors on 1100/24, 1325/24, and 1480/24 size cables.

- Crimper assembly 9572744 consists of the following:
- 9572745 Electro-Hydraulic Tool** - 110 VAC 60 Hz
 - 9572746 Crimping Head** - Power Unit
 - 9572747 Handle Control Assembly** - 7 foot hose and cord

- 9572740 Chart-Die Set** - Consists of:
- 9572741** - 1100/24
 - 9572742** - 1325/24
 - 9572743** - 1480/24

9568869 Hand Operated Crimping Tool - The crimping device is a portable hand-held tool that can be taken to the job site and used, instead of taking the work to the location of the crimper. This device does not require any electrical hookup.

The following dies for use with various sized crimp type connectors are available for use with hand operated crimping tool 9568869.

ORDERING REFERENCE			
DIES		CABLE SIZE	CRIMP TYPE CONNECTOR
UPPER	LOWER		
9568873	9568872	1100/24	9557075
9568870	9568871	1325/24	9564991
9569980	9568871	1480/24	9564992

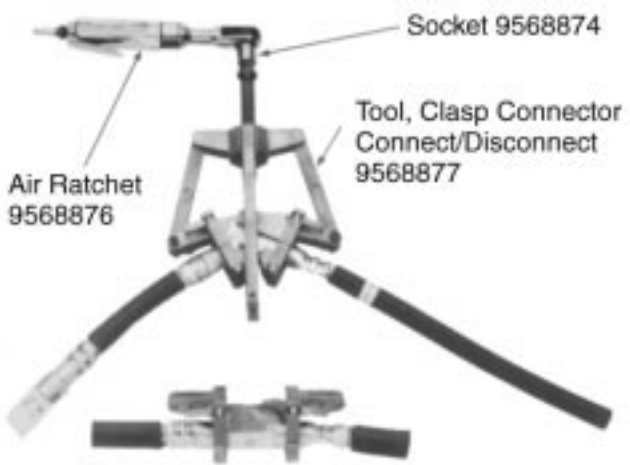
(see picture left)

9568877 Tool, Clasp Connector

9568876 Ratchet, Air, 3/8" Drive

9568874 Socket, 3/4" - 3/8" Drive

For joining/breaking traction motor clasp-type connectors.



T30182

Section 3: Equipment

Air Compressor



8205493 Guide - Piston Ring 7-7/8" - WXO, ABO, ADJ, WBO, ADJV, WXOV, WLN, WLO, WLQ, WLR, WLS

8205490 Guide - Piston Ring 4" - ABO, ADX, ADJ, ABOV, ADJV, WLP, WLQ, WLS

8205491 Guide - Piston Ring 5-3/4" - WXE, WXO, WBO, WBG, WXOV, WXG, WLO, WLN, WLG, WLR

8205492 Guide - Piston Ring 7" - WXE, WXG, ADX, WLG

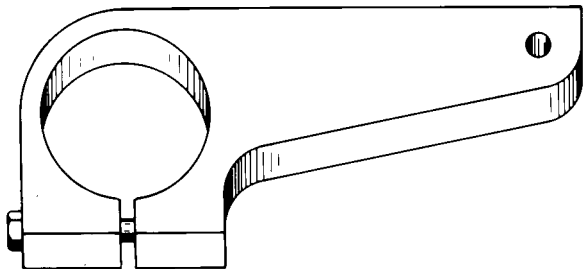
8034087 Guide - Piston Ring 8-1/2" - ABOV, WBO, WXO, ADJV8106, WXOV, ADJV8400



8231758 Scraper - Piston Bushing Groove

8231765 Blade - Scraper - For 8231758

8231766 Guard - Blade - For 8231758



8214756 Holder - Unloader Valve - ABO, ADX, ADJ, ADJV, ABOV, WLP, WLQ, WLS

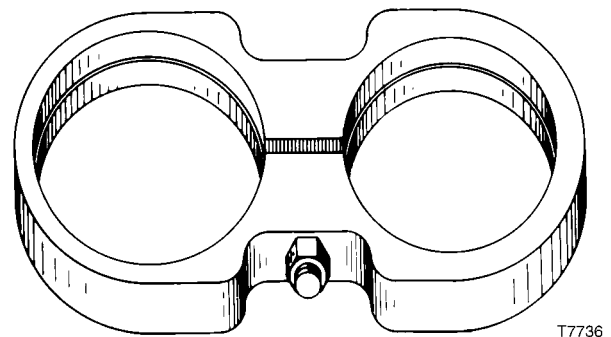


8129900 Guide - Oil Seal 2-1/2" - ABO, ADX, ADJ, ADJV, WLQ, WLS

8219901 Guide - Oil Seal 3-1/4" - WXE, WXO, WXG, WBO, WBG, ABOV, WXOV, WLG, WLN, WLO, WLP, WLR

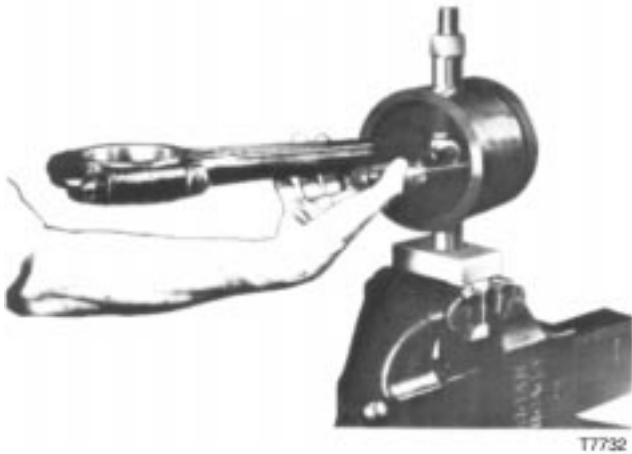


8231757 Puller - Piston Bushing



8214755 Holder - Unloader Valve - WXE, WXO, WLG, WBO, WBG, WXOV, WLO, WLG, WLR

EQUIPMENT - Air Compressor



8213878 Fixture - Piston Assembly (used to assemble Piston, Rod and Piston Pin - all Models)



8214312 Spreader - Connecting Rod, Use with 8213878



8205283 Expander - Piston Ring 4" - ABO, ADX, ADJ, ABOV, ADJV, WLP, WLQ, WLS

8205284 Expander - Piston Ring 5-3/4" - WXE, WXO, WXG, WBO, WBG, WXOV, WLG, WLN, WLO, WLR

8205285 Expander - Piston Ring 7" - WXE, WXG, ADX, WBG, WLG

8205286 Expander - Piston Ring 7-7/8" - WXO, ABO, ADJ, WBO, ADJV, WXOV, WLN, WLO, WLQ, WLR, WLS

8194036 Expander - Piston Ring 8-1/2" - ABOV, WLP



8024101 Adapter - Orifice Test - 1/2" Male Pipe - Air Compressor - WBO, ADJ, ADX, ABO, WXO, WXE, WXG, WBG, ABOV, ADJV, WXOV, WLG, WLN, WLO, WLP, WLQ, WLR, WLS

8245757 Adapter - Orifice Test - 2" Male - ADJV, WXOV - Export Compressor ABOV, WLQ, WLR, WLP



8058885 Orifice - .203 - ADJ, ADJV, ADX, ABE, ABO, ABOV

8058886 Orifice - .359 - WBG, WXG, WLG

8062165 Orifice - .281 - WBO, WXO, WXOV, ABOV, WLN, WLO, WLP, WLR

8245758 Orifice - .500 - WXOV - Export ABOV, WLR, WLP

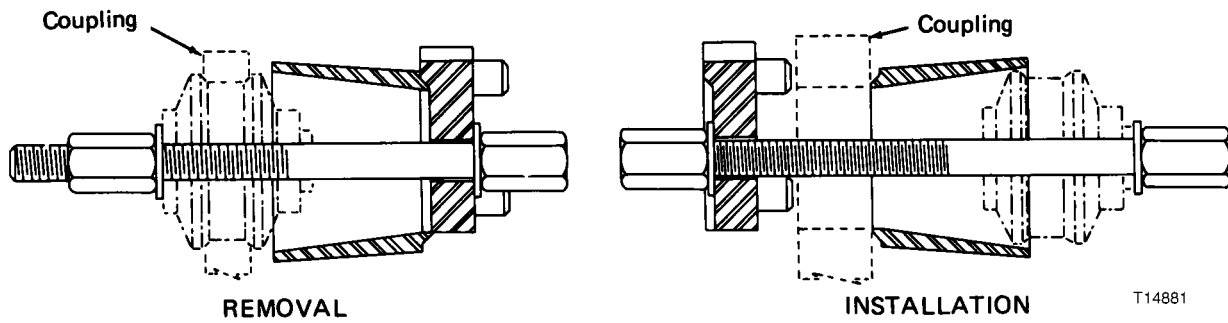
8245759 Orifice - .219 - ADOA, ADD, ADO, ABO

8336669 Orifice - .625 - ADJV, WLQ Exhauster

8024102 Orifice - .250 WXE



8231756 Anvil - Piston Bushing Installing



T8971

8239562 Installer-Remover - Bonded Joint Air Compressor Coupling

8258834 Lubricant - Rubber (applied to Rubber Center Bonded Joints before installation of Joints in the Flexible Coupling)

8102249 Holder - Honing Master Set - 4 pieces 4.75" to 7" Air Compressor Cylinders (not shown)

8254465 Gauge - A.C. Coupling - Air Compressor Bond Joint Application Checking

8254466 Gauge Set - Master (Base Plate and Calibration Discs) - Cooling Fan Drive



T21317

9085874 Adjuster Slack Tool - For Pin type Slack Adjuster 8494013 and 8494109 fitted with Clasp Brakes and also EMD SD Single Shoe Brake Adjuster 8482672, 8482673, 8482674



T6452

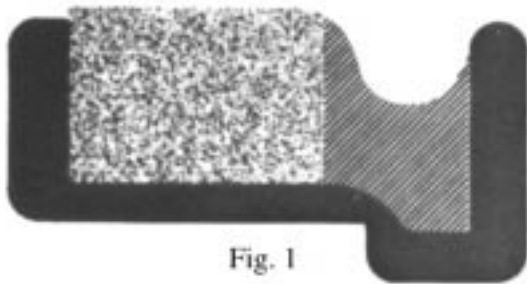


Fig. 1

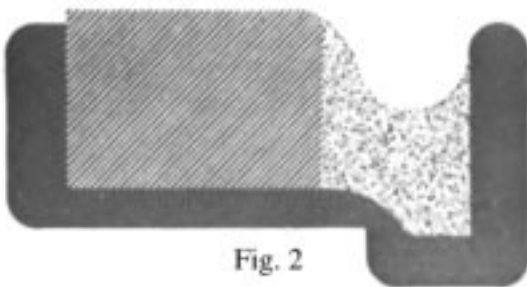


Fig. 2

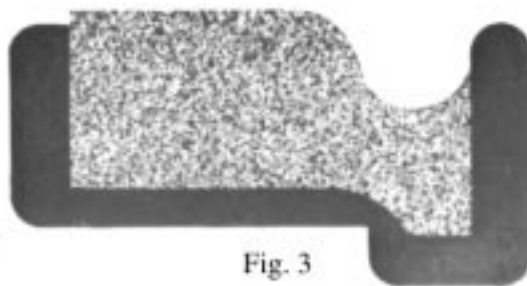


Fig. 3

T7047

8031480 Brake Shoe - Abrasive, Tread Grinding - see chart

8157177 Brake Shoe - Abrasive, Tread Grinding - see chart

8191638 Brake Shoe - Abrasive, Tread Grinding - see chart

8255770 Brake Shoe - Abrasive, Tread Grinding - see chart



T6453

8031482 Brake Shoe - Abrasive, Flange and Tread Grinding - see chart

8191637 Brake Shoe - Abrasive, Flange and Tread Grinding - see chart

8191640 Brake Shoe - Abrasive, Flange and Tread Grinding - see chart

8255768 Brake Shoe - Abrasive, Flange and Tread Grinding - see chart

8031481 Brake Shoe - Abrasive, Flange Grinding - see chart

8191639 Brake Shoe - Abrasive, Flange Grinding - see chart

8191636 Brake Shoe - Abrasive, Flange Grinding - see chart

8255769 Brake Shoe - Abrasive, Flange Grinding - see chart



T19625

8248656 Wrench - Open End - 2-1/2" - Single Shoe Tread Brake Rigging

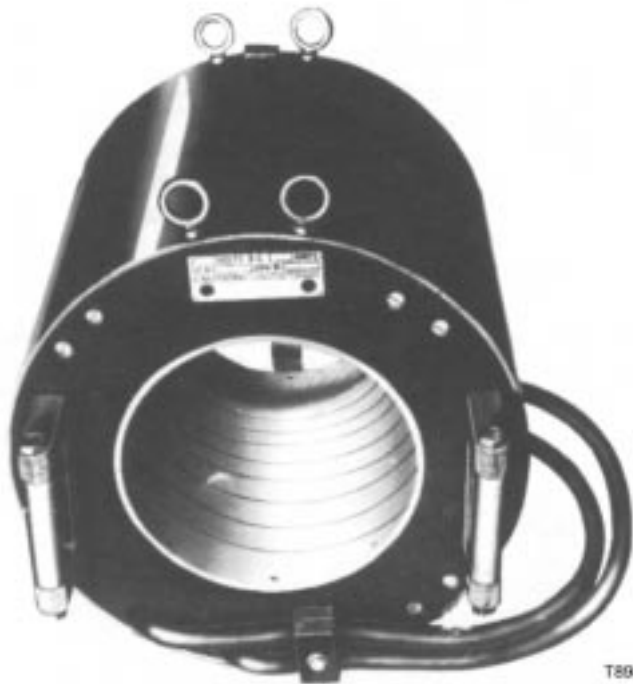
Brake Shoe Application Chart

ABRASIVE SHOE PART NO.	SHOE TYPE*	FOR BRAKE HEAD PART NO.	REPLACES CAST IRON SHOE PART NO.	SHOE SIZE	FIG. NO	APPLICATION
8031482	T-F	8151703	8055667	18"	3	All Switchers With Rigid Switcher Trucks
8031481	F				2	
8031480	T				1	
8255768	T-F	8197973	8058776	18"	3	Switchers With Flexible Trucks
8255769	F				2	
8255770	T				1	
8191637	T-F	8242785	8059235	14"	3	Switchers With Flexible Trucks
8191636	F				2	
8157177	T				1	
8191637	T-F	8160059	8059235	14"	3	All 3 Motor, 3 Axle, SD Trucks
8191636	F				2	
8157177	T				1	
8255768	T-F	8160060	8058776	18"	3	All 3 Motor, 3 Axle, SD Trucks
8255769	F				2	
8255770	T				1	
8191637	T-F	8099398	8059235	14"	3	All F and GP Trucks
8191636	F				2	
8157177	T				1	
8255768	T-F	8104462	8058776	18"	3	All F and GP Trucks
8255769	F				2	
8255770	T				1	
8255768	T-F	8127919 (Drilled)	8058776	18"	3	All F and GP Trucks
8255769	F				2	
8255770	T				1	
8191637	T-F	8160059	8059235	14"	3	All F and GP Trucks
8191636	F				2	
8157177	T				1	
8255768	T-F	8160060	8058776	18"	3	All F and GP Trucks
8255769	F				2	
8255770	T				1	
8255768	T-F	8160061	8058776	18"	3	All F and GP Trucks
8255769	F				2	
8255770	T				1	

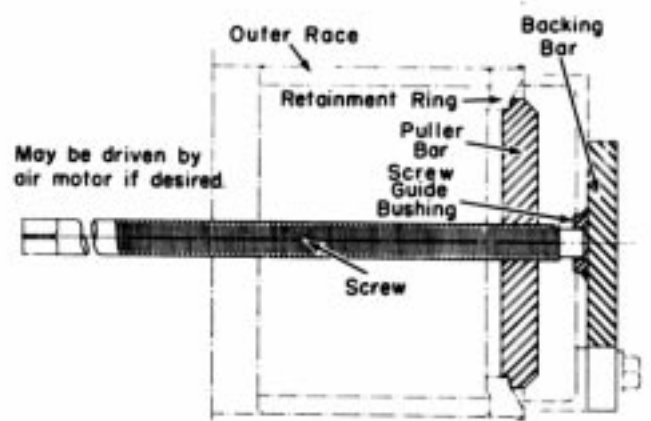
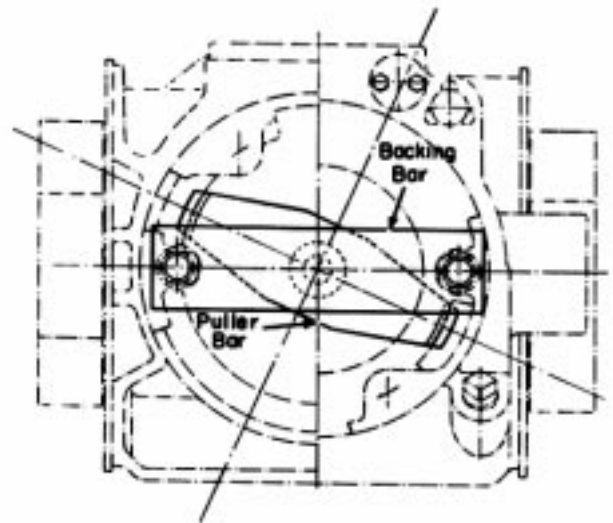
NOTE

Above information pertains to locomotives with 40" diameter wheels. Abrasive shoe orders, for other than 40" wheels, should specify the wheel diameter.

*Symbols: T-F - Tread and Flange
 F - Flange Only
 T - Tread Only



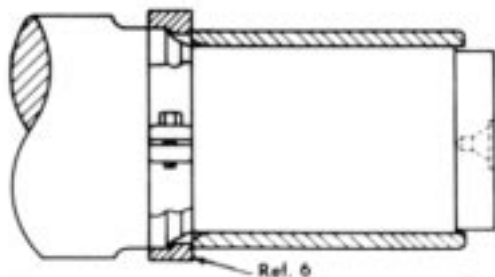
T8883



T5405

8254200 Heater - Induction - Inner Race 5-1/2" x 10"
Journal Box

8254202 Heater - Induction - Inner Race 6-1/2" x 12"
Journal Box



T6455

8164608 Collar - Inner Race Locating - 6-1/2" x 12"
Journal Box

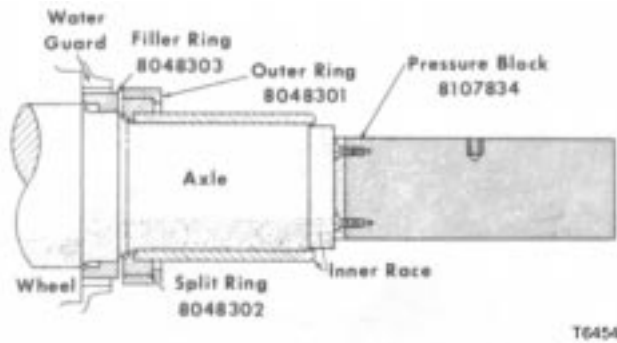
8232368 Collar - Inner Race Locating - 5-1/2" x 10"
Journal Box

8160928 Puller - Outer Bearing Race - 6-1/2" x 12" -
Journal Box with Rubber Thrust Unit

8218541 Puller - (Export only) - Outer Bearing Race - 5-
1/2" x 10" Journal Box

8062137 Puller - Outer Bearing Race - 6-1/2" Journal Box
with Spring Pack

EQUIPMENT - Truck



8048299 Remover - Inner Race - 6-1/2" x 12" Journal Box

8048301 Ring - Outer

8048302 Ring - Split

8048303 Ring - Filler

8107834 Block - Pressure

(not shown)

8219258 Remover Set - Inner Race - 5-1/2" x 10" Journal Box

8219259 Ring - Split

8219260 Ring - Outer

8219261 Ring - Filler

8219262 Block - Pressure

8219263 Ring - Filler

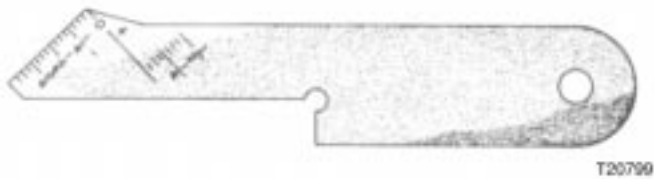
8391625 Gauge - Split Collar Locating - 6-7/8" Axle Journal

8258486 Gauge - Split Collar Locating - 6" x 11" Journal (not shown)

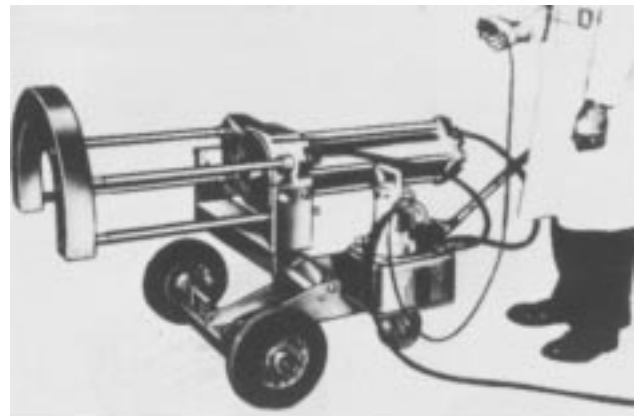


8084927 Gauge - Oil Level - 6-1/2" x 12" Journal

8229173 Gauge - (Export only) Oil Level 6" x 11" and 5-1/2" x 10" Journal Box

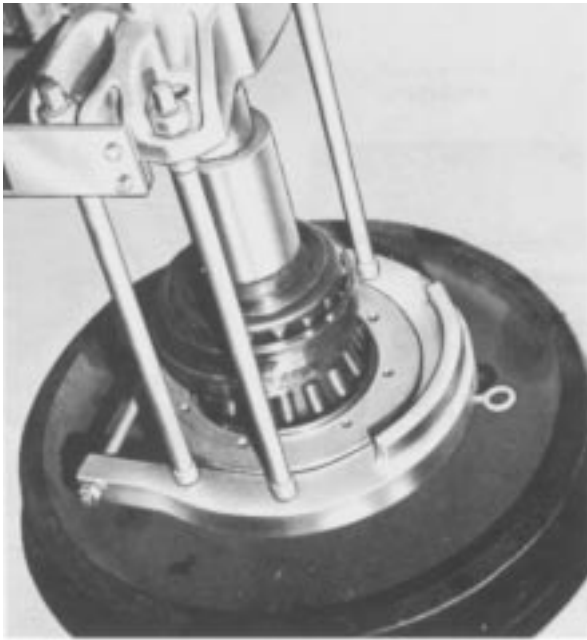


9317668 Gauge - Oil Level Journal (for use on Journals with Filler Cap assembly)



8303330 Puller-Installer - (230V) Hydraulic 100 Ton - Includes 8284317 Puller Shoe (this tool is used with appropriate Adapters [Page 3-8] to remove and apply Timken "AP" and EMD "Hyatt" Type Journal Boxes having tapered Roller Bearings)

40029012 Puller - (380V) - 3 phase (not shown)



T10651

830332 Adapter - Use with 8303330 Puller - Installer for Units having 6" x 11" Timken "AP" or EMD "Hyatt" Journal Boxes with tapered Roller Bearings

8330478 Adapter - Use with 8303330 Puller - Installer for Units having 6-1/2" x 12" Timken "AP" or EMD "Hyatt" Journal Boxes with tapered Roller Bearings (not shown)

Section 4: Miscellaneous



8045450 Drill - Electric 1/4" 115 Volts 50-60 cycles AC-DC



8247142 Drill - Electric 3/4" 115 Volts 50-60 cycles AC-DC

8310502 Drill - Electric 3/4" 230 Volts 50-60 cycles AC-DC



8104770 Drill - Electric 1/2" 115 Volts 50-60 cycles AC-DC



8140315 Set - Hand Tool - Basic Hand Tools for all Locomotives

MISCELLANEOUS

8244011 Wrench - Chain for Drill Rigs (not shown)



T35162



T21320

8361215 Torque Wrench and Drivers - Includes Torque Wrench (0-50 in. lbs.), Hand Driver, 7/16" Hex Socket, 5/64", 3/32", 1/8", 5/32", and 3/16" Hex Head Cap Screw Drivers, and Tool Box

8386064 Socket - 1-13/16" Hex - 1" Drive for Main Bearing Cap Nut



T19632

8243903 Set - Hand Tool - Basic Hand Tools for Domestic and Export Locomotives

MISCELLANEOUS



8195349 Wrench Set - Terminal Stud Nut

- 8195350 Wrench - 3/16"
- 8195351 Wrench - 1/4"
- 8195352 Wrench - 5/16"
- 8195353 Wrench - 11/32"
- 8195354 Wrench - 3/8"
- 8195355 Wrench - 7/16"
- 8195356 Wrench - 1/2"



8233829 Protector - Electric Impact Front, Rubber (used on Impact Wrench Sets 8233821 and 8236487)



4004097 Wrench Set - Air Impact - see breakdown

- 4004099 Wrench - Air Impact
- 40040100 Socket Set - Impact 5/8" thru 15/16"
- 40040106 Chuck - Collet Type
- 40040101 Hose - Air 6 ft. - Air Supply to Wrench
- 40040105 Adapter - Impact Wrench - For use with inserts, below
- 40040102 Bit - Insert, Phillips Screwdriver (2)
- 40040103 Bit - Insert, Phillips Screwdriver (3)
- 40040104 Bit - Insert, Phillips Screwdriver (4)
- 40040098 Box, Plastic



8236486 Wrench Set - Electric Impact

- 8236487 Impact Wrench - 230 Volt 50-60 cycles AC-DC
- 8233822 Chuck - Collet Type
- 8324437 Socket Set - Impact
- 8310499 Case - Metal

8233820 Wrench Set - Electric Impact

- 8233821 Impact Wrench - 115 Volt 50-60 cycles AC-DC
- 8324437 Socket Set - Impact
- 8233822 Chuck - Collet Type
- 8310499 Case - Metal

MISCELLANEOUS



8233823 Socket - Impact - 1/2" Hex (Fits all three Impact Sets, 8233820, 8236486, 8259049)

(not shown)

8233824 Socket - Impact - 9/16" Hex (Fits all three Impact Sets 8233820, 8236486, 8259049)

8324437 Socket Set - Impact - 1/2" Drive

8233825 Socket - Hex 5/8"

8233826 Socket - Hex 11/16"

8233827 Socket - Hex 3/4"

8233828 Socket - Hex 13/16"

8324435 Socket - Hex 7/8"

8324436 Socket - Hex 15/16"



9559516 Tester Torque Wrench - (0-6000 in. lbs. and 0-500 ft. lbs.)



8206869 Wrench - Ratchet Torque 30-200 ft. lbs. 1/2" drive

40038258 Wrench - Ratchet 1/2" drive



8290884 Extension - Torque Wrench 8-5/8" - Used with 8206869 - Torque Wrench



8157122 Wrench - Torque 0-25 ft. lbs. 1/2" drive

8375396 Wrench - Torque 0-50 ft. lbs. 1/2" drive

8157120 Wrench - Torque 0-100 ft. lbs. 1/2" drive

8398513 Wrench - Torque 0-250 ft. lbs. 1/2" drive

8173332 Wrench - Torque 0-200 ft. lbs. 3/4" drive

8157121 Wrench - Torque 0-300 ft. lbs. 3/4" drive

8377322 Wrench - Torque 0-500 ft. lbs. 3/4" drive

40038257 Meter - Torque - 0-2000 ft. lbs. 1" drive (not shown)

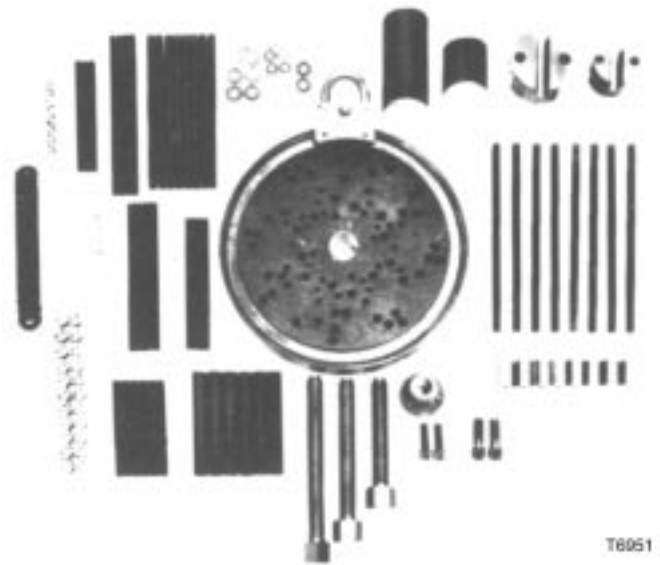


8236719 Remover Set - Stud, 14 Removers 1/4" to 5/8" and Metal Box

MISCELLANEOUS



8238336 Remover Set - Stud 3/4" - 10, 3/4" - 16, 7/8" - 9, 7/8" - 14, 1" - 8, 1" - 14, Plus Housing and Metal Box

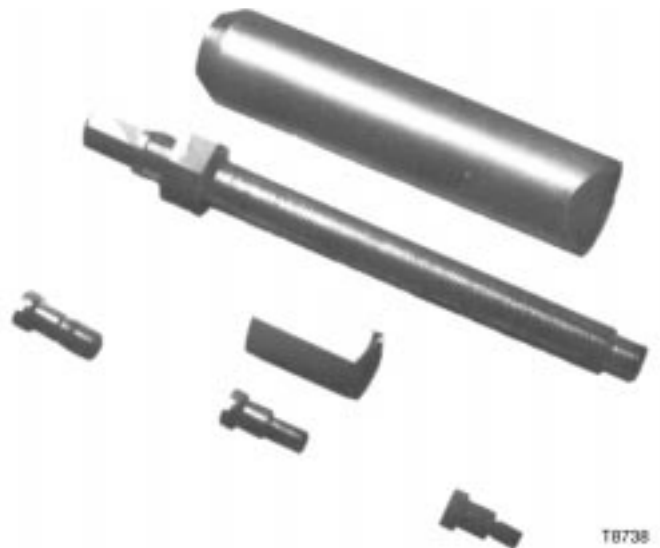


8168577 Plate Assembly - Manual Pulling Kit - Main Gen. Bearing Caps, Traction Motor Bearing Caps, Couplings and Sheaves - D4, 8, 10, 12, 12A, D22, 32, 15, 15A, Main Gen. D7, 77, Traction Motor

8213622 Plate Assembly - Manual Pulling Kit - Traction Motor Export D12, 22, 32, 15, 25, Gen. D19, 29, 36



8044517 Extractor Set - Broken Stud, Screw and Pipe



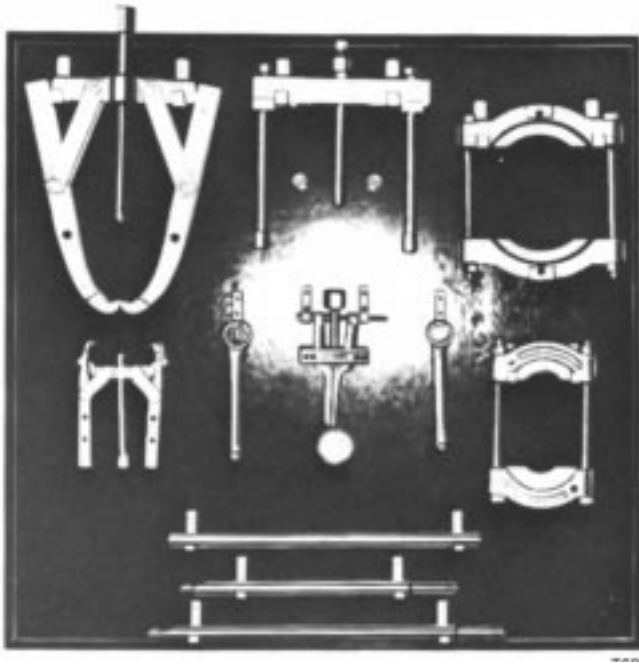
8225989 Puller - Complete, Miscellaneous

8225992 Screw - Shoulder 3/8" - 24

8225991 Screw - Shoulder 5/16" - 24

8225990 Screw - Shoulder 1/4" - 28

MISCELLANEOUS



8068025 Bearing Puller Kit

- 8203626 Leg - 16-1/2" Long Pair
- 8203627 Leg - 22-1/4" Long Pair
- 8203628 Nut - Coupling - For Legs - Pair
- 8203629 Attachment - Bearing Puller
- 8203630 Attachment - Bearing Cap Pulling
- 8317300 Handle - Tubular 24" Long
- 8203632 Wrench - Heavy Duty Box - 1-1/2"
- 8068024 Wrench - Heavy Duty Box - 1-3/8"
- 8068022 Adapter - Sheave Puller
- 8068023 Puller - Gear - 28 Ton
- 8071682 Puller - Gear - Long Jaws - 9 Ton
- 8081157 Puller - Push - Pair 9-1/2" Long Legs

Board - For Tool Set



- 8068029 Puller - Base Dowel - Engine, Generator and Air Compressor



T19589

- 8269291 Adapter - Contact Point to Dial Indicator



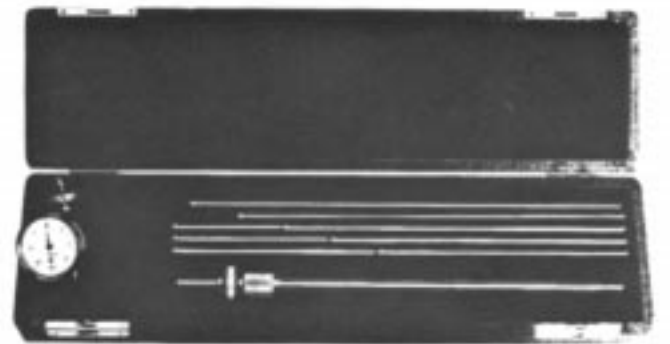
T21901

- 8255423 Indicator Set - Dial (.001" to .100" Generator Alignment)



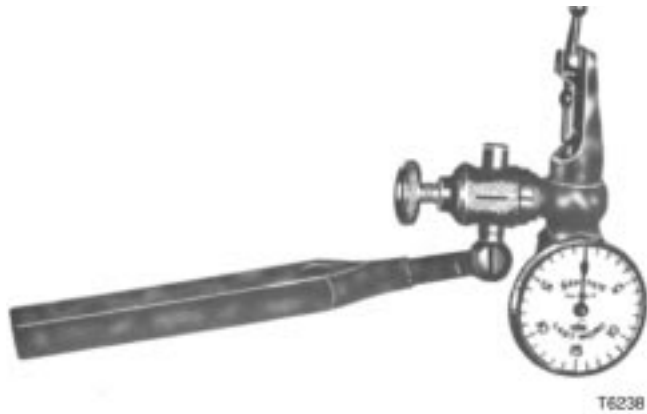
T6305

- 8048327 Bracket - Dial Indicator Support - GE 434 E1-544 B1 for Alignment



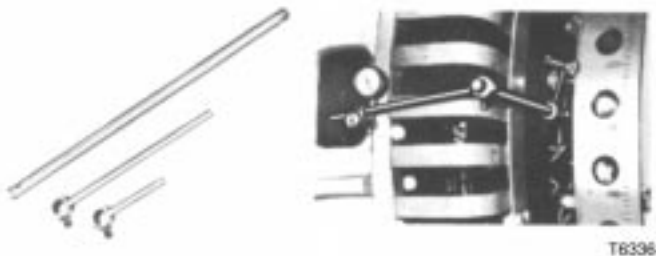
- 8074566 Indicator - Dial Set (Deflection 0" to .020" by .001") Range 2-1/4" to 18"

MISCELLANEOUS



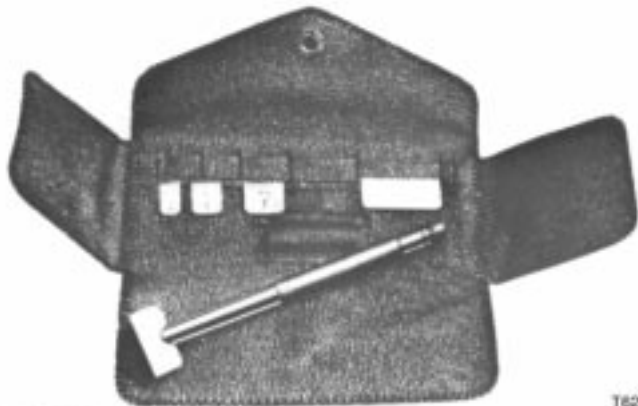
T6238

8088245 Indicator - Dial, Universal Type



T6336

8122000 Rod - Support - Dial Indicator CA5, 6, 7, D14, 16 and 18 Alternators (A20 also requires 8067338)



T6244

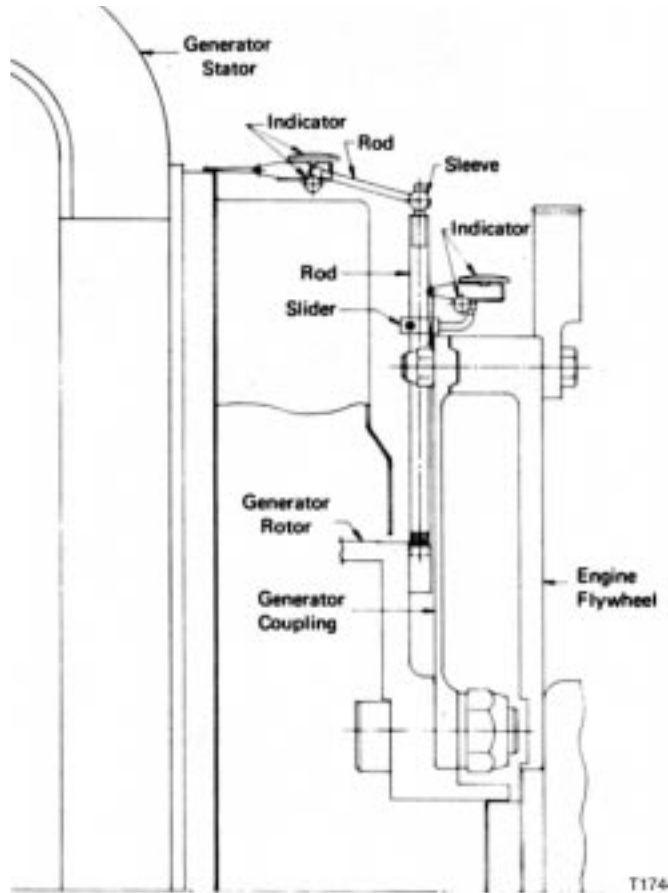
8048288 Rule Set - Pocket



T6245

8070965 Gauge - Thickness, 9 Gauges, .0015" - .015"

8067337 Gauge - Thickness, 13 Gauges, .0015" - .200"



T17442

8460471 Alignment Kit - Engine - Generator

8460472 Indicator

8460473 Slider Assembly

8460476 Rod

8460477 Rod - 12" 1/4 Pipe Tap

8460478 Rod - 13" 1/4 Pipe Tap

8460569 Sleeve



T6260

8460472 Indicator - Includes 9559047 Ball Contact Point, Swivel Clamp, Holding Bar, and Protective Case for Engine Generator Alignment of SD45 and 45X Locomotives having thick Generator Coupling Discs

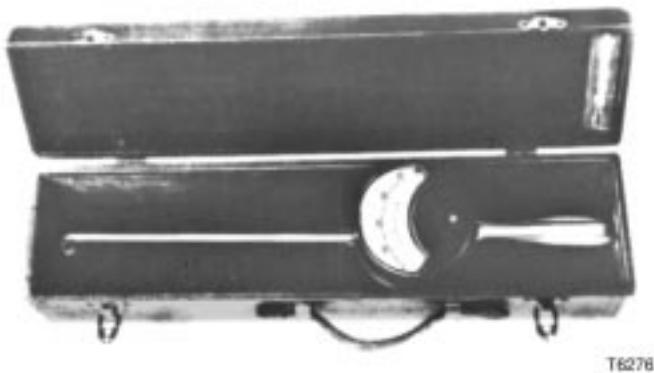
MISCELLANEOUS



8067338 Rod - Dial Indicator Support - All Main Generator (A20 also requires 8122000)



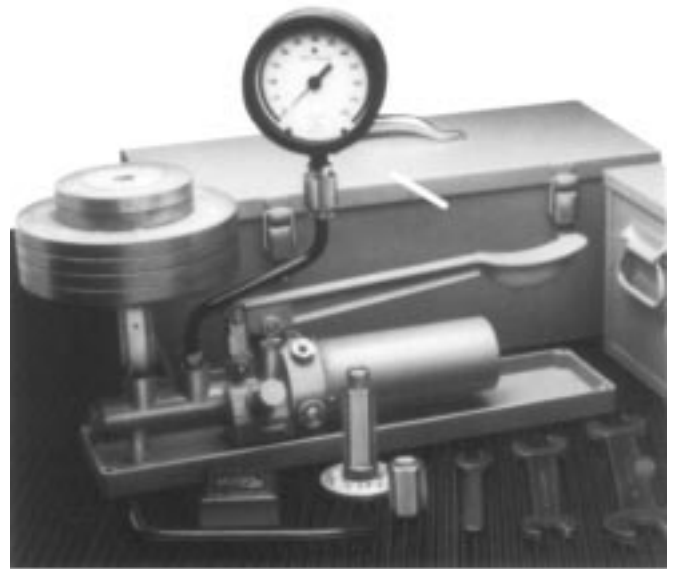
8133046 Rod - Support - Dial Indicator Air Compressor Couplings and Miscellaneous



8364533 Pyrometer - Hand Type - 0-400 Degrees F. (Used to check temperature at various points on the Traction Motor Pinion)

9576269 Thermocouple

9576270 Thermocouple ADJ Shield



40021300 Tester - Gauge - 10 lb. weight

40021301 Tester - Gauge - 20 lb. weight

40021302 Tester - Gauge 40 lb. weight

8064951 Tester - Gauge - Dead weight type 10-1000 lbs.

(not shown)

8107967 Tachometer - Hand Digital - Governor and Miscellaneous

8134499 Tip - Triangular Steel

8141248 Tip - Conical Rubber

8204947 Rod - Extension 1-1/2" long

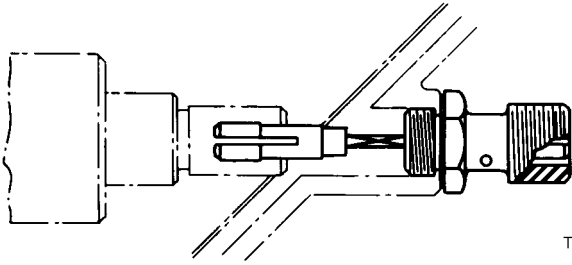
8391963 Rod - Extension 3" long

9531652 Tip Assembly - Includes Metal Shank and 8141248 Rubber Tip



8237839 Rod - Tachometer Extension - 6" long - Drill Rig Mud Pump (Used with 8107967)

MISCELLANEOUS



T8686

8210556 Adapter - Tachometer Drive for Governor Drive Housing (Use with 8107967)



T34836

INSPECTION TABLES - Various sizes available for checking critical component dimensions - Call for further information



T6008

8243752 Tester - Tachometer - 220 volts 50 cycles

8189242 Tester - Tachometer - 110 volts 60 cycles



T6227

8078996 Bender - Copper Tubing 1/4" O.D. Tube

8078997 Bender - Copper Tubing 5/16" O.D. Tube

8078998 Bender - Copper Tubing 3/8" O.D. Tube

8078999 Bender - Copper Tubing 1/2" O.D. Tube

8079000 Bender - Copper Tubing 5/8" O.D. Tube



T35156

40033472 Tachometer - Contact/Non-Contact

MISCELLANEOUS



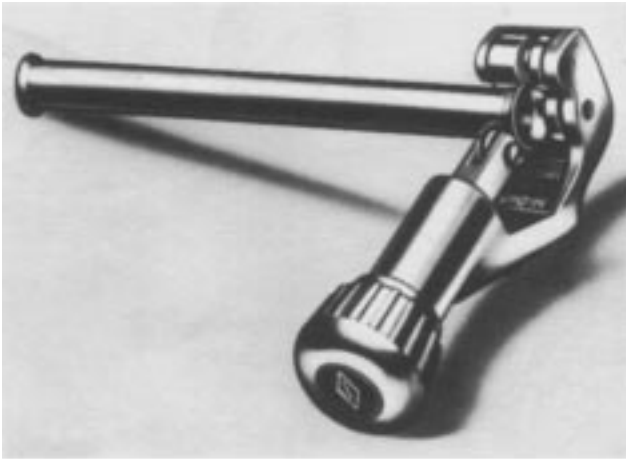
T19378

8491650 Tubing Assembly Kit - Kit includes:

- 1) Assembly Tool
- 2) Ratchet
- 3) Adapter for 1/4", 3/8", 1/2", 5/8"
- 4) Mandrel for 1/4", 3/8", 1/2", 5/8"
- 5) Cutter 1/4", 3/8", 1/2", 5/8"

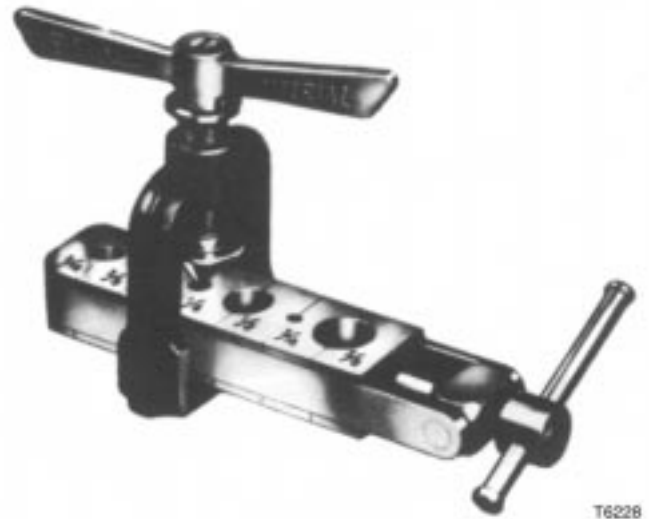
For use with Thermoplastic Air Brake Tubing

40038307 Adapter Set - includes 1/4", 3/8", 1/2" and 5/8"



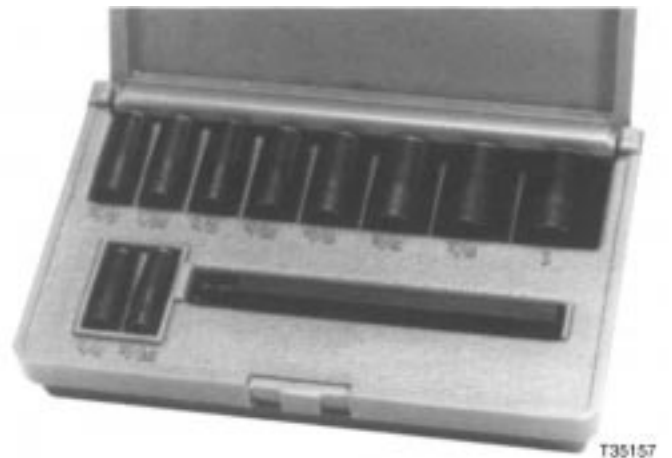
T8730

8097539 Cutter - Copper Tubing 1/8" to 1" O.D.



T6228

8042090 Flare Set - Copper Tube 3/16" to 5/8" O.D. Tube



T35157

40001105 Punch Set - Gasket Cutting 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", 1" Holes

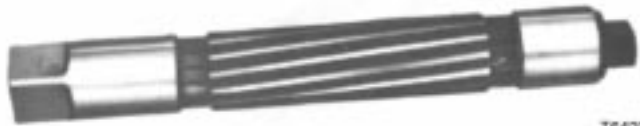


T6360

8074592 Reamer - Expansion 15/16" to 1-1/16"

8074594 Reamer - Expansion 1-17/32" to 1-25/32"

MISCELLANEOUS



T6423

8160052 Reamer - Expansion 1-3/4" - Crankshaft



T19577

8074595 Reamer - Hand 29/32" Spiral Flute

8074597 Reamer - Hand 1-1/2" Spiral Flute

8074593 Reamer - Hand 7/8" Spiral Flute



T6438

8044484 Reamer - 1/2"



T6229

8078994 Reamer - I.D. and O.D. 3/16" to 1-1/2" in O.D. Tubing

8204252 Tap and Die Set - 1/4" to 1" Tap, 1/4" to 1" Die and Collet (not shown)



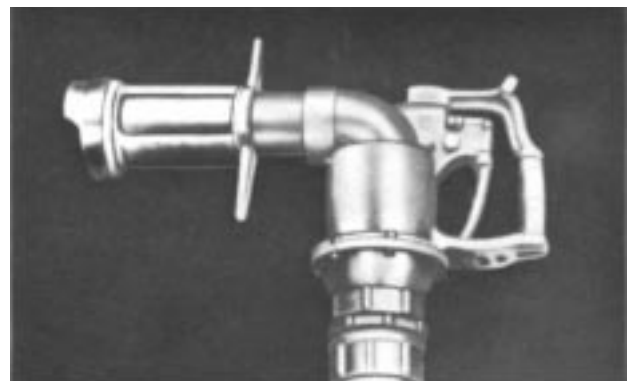
T6449

8032710 Extractor - Speed Recorder Drive Splined Bushing - all bushings



T19593

8266394 Flexabrasive - Grinding Wheel 2" diameter, 1" wide 1/4" Arbor for D37, 75, 77 Traction Motors (used to clean the traction motor end wire band and string band behind the commutator riser)



T7511

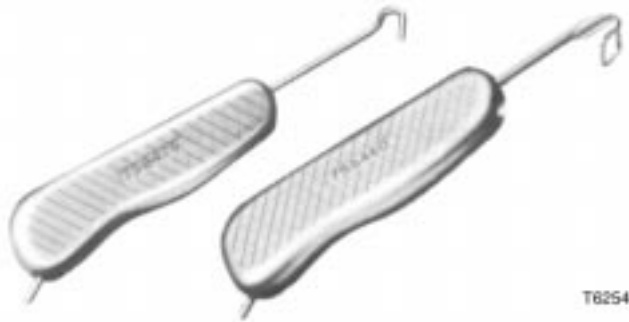
8215342 Coupling - Water Filler only, Locomotive having Protectoseal 1/4" turn tank fillers

8215724 Gasket - Coupling

8215343 Coupling - Fuel Filter only, Locomotive having Protectoseal 1/4" turn tank fillers

8215723 Gasket - Coupling

MISCELLANEOUS



756475 Installer - Weather Seal

756476 Installer - Hook

756460 Installer - Rubber Seal Filler Strip

756461 Installer - Eye



Installation Tool High Impact Glazing

9525023 Bit Straight

9525024 Bit Curved

9525025 Handle

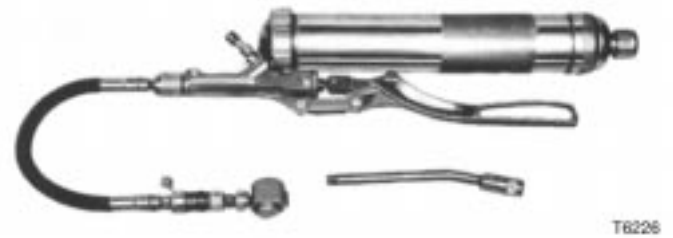


8064859 Lathe Adapter - Idler Axles and Speedometer Drive Bushing



8396624 Tester - Belt Tension

8499510 Tester - U Belt Tension - Dust Bin Blower Drive - Export and SW Models (not shown)



8078268 Gun - Grease - Complete (up to 10,000 lbs. pressure)

8078269 Gun - Grease - only

8078270 Hose Assembly - Grease Gun

8078271 Adapter - Grease Gun



8216953 Adapter - Grease Gun

MISCELLANEOUS



8231538 Dispenser - Lubricant - non asphalt type
Traction Motor Gear Case



8099111 Pump - Transfer fits 2" Drum Opening - Air operated as low as 20 psi - Lubricants includes hose assembly 8099110

8099110 Hose Assembly - Transfer pump 3/4" x 8 ft. long



8078273 Kit - Soldering Torch (includes 5 torch stems, torch handle, hose assembly, case [not shown] regulator, adapter)

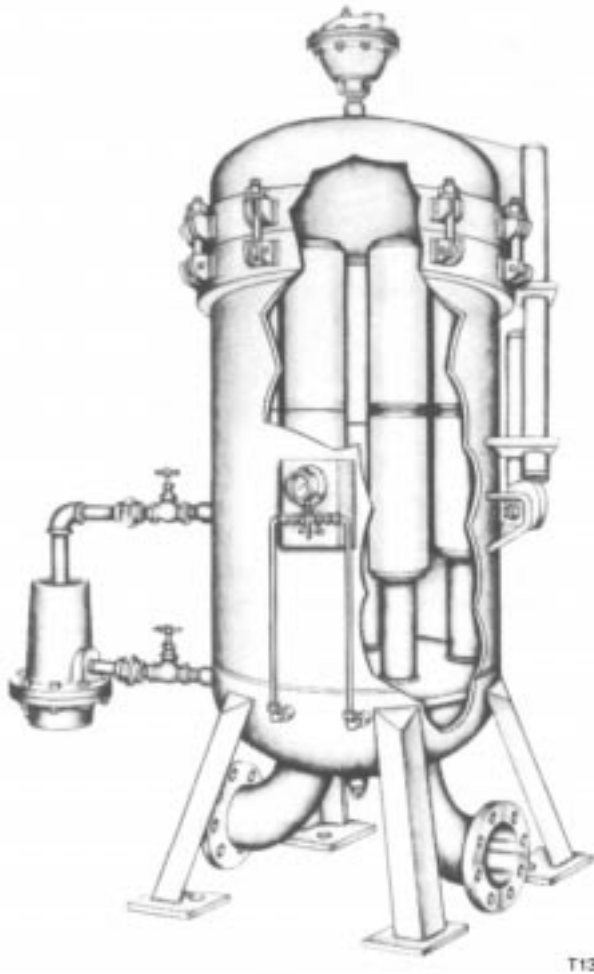
(not shown)

8078274 Tank - Acetylene Gas - B size, 40 cu. ft. charged (used with 8078273)

8210045 Tank - Acetylene Gas - MC size, 10 cu. ft. charged - soldering (used with 8078273)

8210127 Handle - MC Tank (used with 8078273)

MISCELLANEOUS



200 GPM Separator - Filter Conversion Kit 8356982 for Separator - Filter Assembly 8211392

8307731 Lubricant - Texaco Threadtex 70 lb. pail (used on Crab Bolt and Nut Threads) all 567, 645 and 710 engines (not shown) (discontinued)



T12032

8342123 Compound - Anti-Seize and Sealing - 1 lb. can
(not shown)

8232869 Detector - Freon leak

8004228 Light - Drop assembly - 25 ft. cord

8217241 Tube - Glass Manometer "U" tube



T21351

8356983 100 GPM Separator - Filter assembly, complete
8356999 O-Ring Cover Gasket - (1 required)
8356998 Coalescar Element - (3 required)
8357002 Separator Element - (4 required)

Dimensions 56" High, 20" diameter requires another 15" clearance for cartridge removal.

(not shown)

8356984 200 GPM Separator - Filter assembly, complete
8357003 O-Ring Cover Gasket - (1 required)
8356998 Coalescar Element - (6 required)
8357002 Separator Element - (8 required)

Dimensions 68" high, 26" diameter requires another 15" clearance for cartridge removal.

For those customers with the old style 100 GPM and 200 GPM Separator - Filter kits have been developed to convert these units to use the latest coalescar and separator elements. For these applications we herewith release:

100 GPM Separator - Filter Conversion Kit 8356981 for Separator - Filter Assembly 8218440



T6225

8193041 Gun - Spray - General cleaning - Air suction feed

MISCELLANEOUS



8078995 Nozzle - Air hose



40034180 Flexible Inspection Light



8172844 Cleaner - Vacuum 115 volts 50-60 cycle 1 phase AC-DC (Break 8172845)

8172845 Cleaner - Vacuum 230 volts 50-60 cycle 1 phase AC-DC

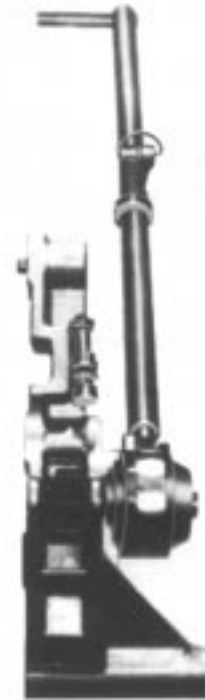
8172852 Shoe - Steel wear

8172850 Gasket - Lid to tank, Doyle

8172851 Bag - Dust, Doyle

8172855 Hose - Rubber covered - 10 ft. Doyle

8172857 Connector - 2" diameter, Doyle



9560336 Crankover Tool - Can utilize the saddle applied to most locomotives or can be mounted without removing starters - (will not fit heavy flywheels)



9560337 Air Drive Kit - For crankover tool 9560336

MISCELLANEOUS



T28314

9560338 Remote Control - For Air Drive Kit 9560333 and 9560337



T28315

9560334 Electric Drive Kit - For Crankover Tool 9561844 and 9560336 (115 VAC 400 RPM [no load])



T28311

9561844 Crankover Tool - Can be used on any engine with ring gear including heavy flywheel. Can be applied without removing starters.



T21340



T28313

9560333 Air Drive Kit - For Crankover Tool 9561844

8079401 Wrench Set - Adjustable spanner

8079398 Wrench - Adjustable spanner 3/4" to 2"
Passenger, SW, G8, G12, G16

8079399 Wrench - Adjustable spanner 1-1/2" to 3"

8079400 Wrench - Adjustable spanner 2" to 4-3/4"

MISCELLANEOUS



8222901 Threader - Pipe Ratchet Handle complete 1/8", 1/4", 3/8", 1/2", 3/4" Die Head

8222902 Threader - Pipe Ratchet Handle complete 1", 1-1/4", 1-1/2", 2" Die Head

(not shown)

8263531 Jack - Hydraulic

8266149 Pump

8152395 Hose

8263532 Ram - 10 ton capacity (6-7/8" ext. height, 4-5/8" collapsed height - 2-1/4" plunger travel, 2-1/4" outside diameter 1-1/2" plunger diameter)



9320842 Lapping Compound - Jewelers red paste - 1 qt. can (used for plunger and bushing) all 567 and 645 Engines



8296154 Tap - Tapered Pipe 1/4"-18 (pipe and tubing)

8296155 Tap - Tapered pipe 3/8"-18 (pipe and tubing)

8296156 Tap - Tapered pipe 1/2"-14 (pipe tubing)



8201455 Glass - Magnifying (3 plus) without distortion (used to check cracks, scratches, etc. on injector spherical valve assembly, spacer and spring cage)



40034177 Digital Calipers - Resolution is 0.01 mm or 0.0005"

Section 5: Alphabetical Index

A

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8178937 Abrasive	2-22
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40033531 Adapter	1-1
40040105 Adapter	4-3
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8034054 Adapter	1-13
8068022 Adapter	4-6
8070872 Adapter	1-19
8078271 Adapter	4-12
8140761 Adapter	1-6, 1-8
8195928 Adapter	2-5
8204168 Adapter	2-3
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8210556 Adapter	4-9
8210938 Adapter	1-43
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