



Test Monitoring Center

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Pittsburgh, PA 15206-4489
(412) 365-1000

MEMORANDUM: 03-080
DATE: September 16, 2003
TO: Single Cylinder Diesel Surveillance Panel
FROM: Scott Parke
SUBJECT: Remanufacturing of 1M-PC Connecting Rods

As discussed during our recent teleconference, Chuck Dutart of Caterpillar has located a company able and willing to remanufacture 1M-PC connecting rods. Attached is the procedure to follow to have rods remanufactured to Cat's specifications.

SDP/sdp/mem03-080.sdp.doc

c: <ftp://ftp.astmtmc.cmu.edu/docs/diesel/scote/memos/mem03-080.pdf>

Attachment

Distribution: email

Caterpillar Powertrain Systems, SCOTE Maintenance 4H-5348 (1M-PC) Connecting Rod Remanufacturing Procedure

Caterpillar has terminated its program for manufacturing the 4H-5348 connecting rod associated with the 1Y-0073 (1M-PC) engine. A procedure to remanufacture the connecting rod has been established and is shown in Appendix A. The machining drawing for the rod is shown in Appendix B. The oil test industry has several options they may pursue:

1. You may purchase services directly from the supplier identified by Caterpillar:
Developmental Industries, Inc
Contact: Todd Height
Phone: (888) 343-0456
Fax: (662) 287-6744
email: todd@dimetalworks.com
915 Highway 45
Corinth, MS 38834
www.dimetalworks.com
2. Individual test laboratories or the oil testing industry may identify a supplier they prefer to purchase services from.
3. Industry may collaborate and purchase new connecting rods. Caterpillar could identify a capable supplier.
4. Industry may collaborate and create a pool of rods to be remanufactured and distributed among registered labs (and others if desired).

Pricing for the remanufacturing process will be determined by direct quotation from the supplier to the customer. Supplier shall be responsible for any and all warranties (if any) for the work performed. Caterpillar makes no warranties or representations of any kind about Supplier's capabilities, performance, services or the remanufactured parts connected with this Agreement and specifically disclaims any and all liability, including but not limited to liabilities for damages, judgments, costs, or expenses arising out of the work performed, or product supplied to Customer by Supplier.

Questions regarding this procedure may be referred to:

Chuck Dutart
Oil Test Engine Lead Engineer
Product Support Division, Caterpillar, Inc.
Bldg H, M/Z H2000
P.O. Box 4000
Mossville, IL 61552
Phone: (309) 578-4070
Fax: (309) 578-3653
Email: dutart_charles_h@cat.com

APPENDIX A

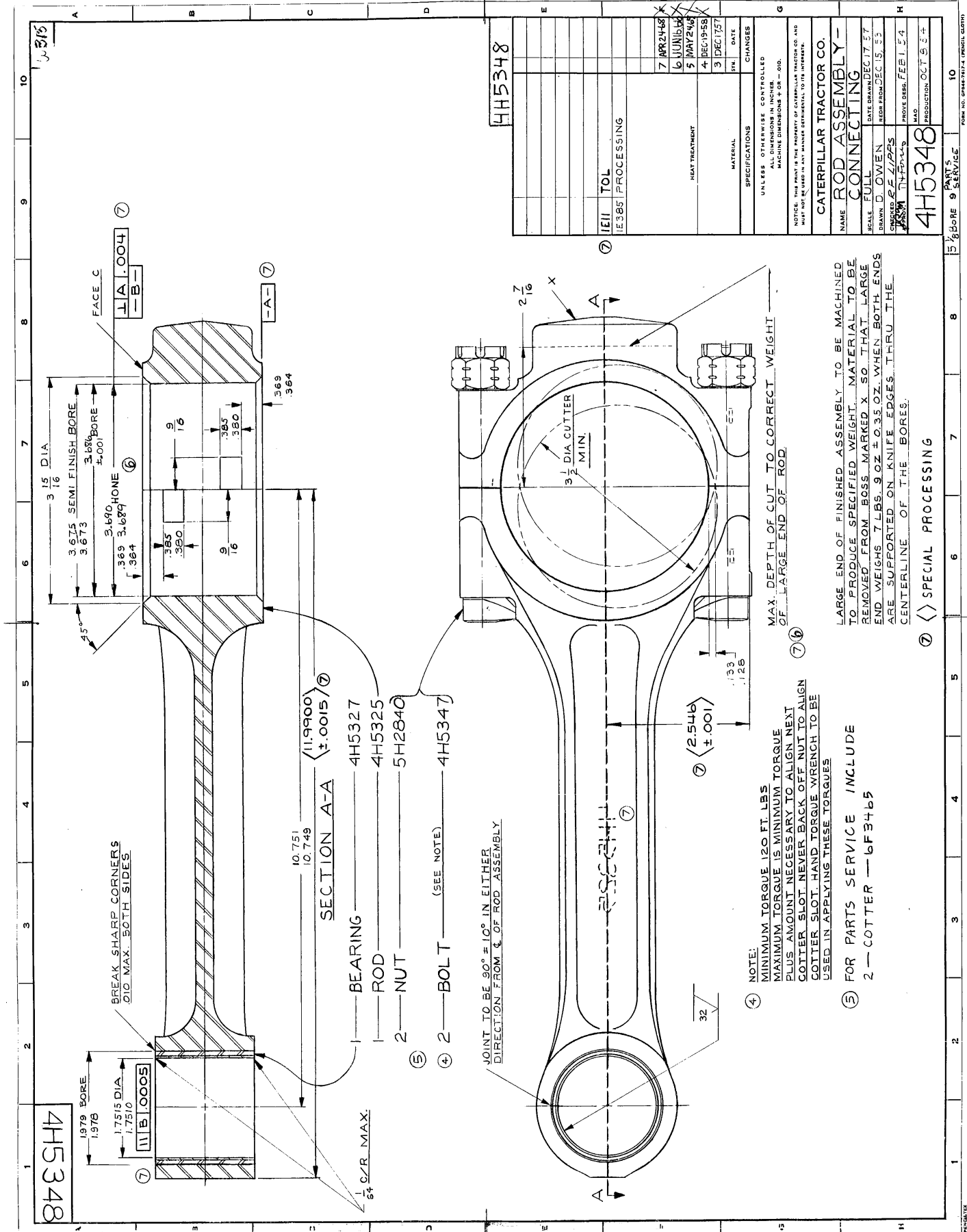
4H-5348 Connecting Rod Remanufacturing Procedure

1. Customer purchases the following parts from their Caterpillar dealer:

Qty	P/N	Part Name	Comments
1	4H-5327	Bearing-Sleeve	Required
2	4H-5347	Bolt-Rod	Recommended
2	4H-2840	Nut-Castle	Recommended
2	6F-3465	Cotter pin	Recommended

2. Customer cleans worn connecting rod and assembles cap loosely with old nuts.
3. Customer ships rod assembly with new bolts, nuts, and rod eye bearing to supplier.
4. Supplier performs the following operations:
- a) Visually inspect rod – reject rod that is unacceptable to Supplier
 - b) Inspect rod for cracks using the Magnaflux process – reject cracked rod
 - c) Inspect crank journal bore – reject out of tolerance rod unless customer requests bore be machined
 - d) Remove old rod eye bushing, install new bushing, and machine bushing to meet drawing specifications.
 - e) Install new rod bolts and loosely assemble cap with new nuts
 - f) Ship remanufactured rod to customer
5. Customer installs remanufactured rod in engine with new cotter pins

APPENDIX B



4H5348

3/15

4H5348

ITEM	TOL	DATE	CHANGES
1E385	PROCESSING		
		7 APR 24 88	
		6 JUN 16 88	
		5 MAY 24 88	
		4 DEC 19 88	
		3 DEC 17 87	

UNLESS OTHERWISE CONTROLLED
ALL DIMENSIONS IN INCHES
MACHINE DIMENSIONS ± OR - 0.010

NAME ROD ASSEMBLY -
CONNECTING

SCALE FULL DATE DRAWN DEC 17 87
DRAWN D. OWEN REDES FROM DEC 15, 85
CHECKED R.F. ZAPPAS
DESIGNED BY J. P. OWEN PROVE DESG. FEB 1, 84
MATERIAL
HEAT TREATMENT
MATERIAL
SPECIFICATIONS

NOTICE: THIS DRAWING IS THE PROPERTY OF CATERPILLAR TRACTOR CO. AND
MAY NOT BE USED IN ANY MANNER DETRIMENTAL TO ITS INTEREST.

CATERPILLAR TRACTOR CO.

4H5348

PRODUCTION: OCT 5 88

- SECTION A-A (11.9900 ±.0015) ⑦
- 1 — BEARING — 4H5327
 - 1 — ROD — 4H5325
 - 2 — NUT — 5H2840
 - ④ 2 — BOLT — (SEE NOTE) — 4H5347

④ NOTE:
MINIMUM TORQUE 120 FT. LBS
MAXIMUM TORQUE IS MINIMUM TORQUE
PLUS AMOUNT NECESSARY TO ALIGN NEXT
COTTER SLOT. NEVER BACK OFF NUT TO ALIGN
COTTER SLOT. HAND TORQUE WRENCH TO BE
USED IN APPLYING THESE TORQUES

⑤ FOR PARTS SERVICE INCLUDE
2 — COTTER — 6F3465

⑦ MAX. DEPTH OF CUT TO CORRECT WEIGHT
OF LARGE END OF ROD

⑦ LARGE END OF FINISHED ASSEMBLY TO BE MACHINED
TO PRODUCE SPECIFIED WEIGHT. MATERIAL TO BE
REMOVED FROM BOSS MARKED X SO THAT LARGE
END WEIGHS 7 LBS. ± 0.35 OZ. WHEN BOTH ENDS
ARE SUPPORTED ON KNIFE EDGES THRU THE
CENTERLINE OF THE BORES.

⑦ SPECIAL PROCESSING