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MANUAL PREVIEW

White

Service Manual

D585 Engine

With External Oil Filter

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Service Manual

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WH-S-ENG D585

SECTION I

SPECIFICATIONS

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GENERAL

Number of Cylinders	6
Cylinder Bore	4-3/4
Stroke	5-1/2
Displacement (cu. in.)	585
Firing Order	1-5-3-6-2-4
Engine Speed	
Low Idle	700
At Load	2200
High Idle	2335
Compression Ratio	15.3:1
Compression Pressure at Cranking Speed of 215-225 rpm	440-460
Allowable Pressure Variance Between Cylinders (Total)	10%

ENGINE LUBRICATION SYSTEM

Type	Pressure
Oil Filter	Full Flow®
Crankcase Capacity w/o Filter	14
Crankcase Capacity w/Filter	16
Oil Press at Load Speed	50-60
Recommended Oil Type	
SAE Class	CC
White Farm Equipment Company	Farm Engine Super

NOTE: If diesel engine is being operated on fuel having sulphur content in excess of 0.5%, use API CB-CC-CD, MIL-L-45199B (Series 3).

COOLING SYSTEM

*Coolant Capacity (quarts)	37
Operating Temperature (Normal)	195°
Temperature Control (All)	Power Pill Thermostat

*Does not include cab heater. Add approx. 6 quarts coolant when heater is installed.

FUEL INJECTION EQUIPMENT

Injector Nozzle Opening Pressure	
New	2800
Serviced	2600
Injection Pump Timing (static)	4° ATC
Injector Stud Nut Torque (ft-lbs)	
Injector Clamp Bolt Torque (ft-lbs)	20
Fuel Lines to Pump (ft-lbs)	35-40

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FUEL INJECTION PUMP

APPLICATION	MM NUMBER	ROOSA-MASTER NO.	LBS/HR FUEL RATE
Electric Shut Off	20-0009182	DBGFCC 633-2DW	66.5 @ 22 RPM MAX LOAD

CRANKSHAFT

Main Bearing Journal Diameter	3.498-3.499
Connecting Rod Journal Diameter	3.498-3.499
Main Bearing Clearance	0.0017-0.0042
Connecting Rod Bearing Clearance	0.0023-0.0053
End Play	0.008-0.012
End Play Controlled by flanged rear main bearing.	
Maximum Out-of-Round or Taper	0.0003

CONNECTING RODS

Pin Bushing Bore Diameter	2.0620-2.0630
Bearing Bore Diameter	3.6915-3.6925
Length (pin centers)	10.749-10.751

PISTON PINS

Length	3.820-3.825
Diameter	1.8745-1.8747
Pin Bore Diameter in Piston	1.8748-1.8750
Pin Fit in Piston @ 70° F.	0.0001-0.0005 loose

PISTON PIN BUSHING

Length	1.730
Installed I.D.	1.8759-1.8762

CYLINDER BLOCK, PISTONS

Standard Bore Diameter	4.752-4.753
Standard Piston Diameter at Bottom, 90° from Pin	4.744-4.745
Skirt Clearance (thrust area)	0.007-0.009
Ring Groove Width	
No. 1 (top)	0.096-0.097
No. 2	0.096-0.097
No. 3	0.096-0.097
No. 4	0.1885-0.1895
Ring Clearance in Groove	
No. 1 (top)	0.0025-0.0045
No. 2	0.0025-0.0045
No. 3	0.0020-0.0040
No. 4	0.0015-0.0035



VALVE SEQUENCE FROM FRONT OF ENGINE (D585)
I-E-I-E-I-E-I-E-I-E

DRIVE GEAR TO BODY CLEARANCE MUST BE .010-.030
WITH GEAR IN PUMP BOTTOMED IN BORE.

Gears in oil pump used on D585 engines must withstand
60 ft. lbs. without turning.

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PRESSURE REGULATING SHIMS (D585)

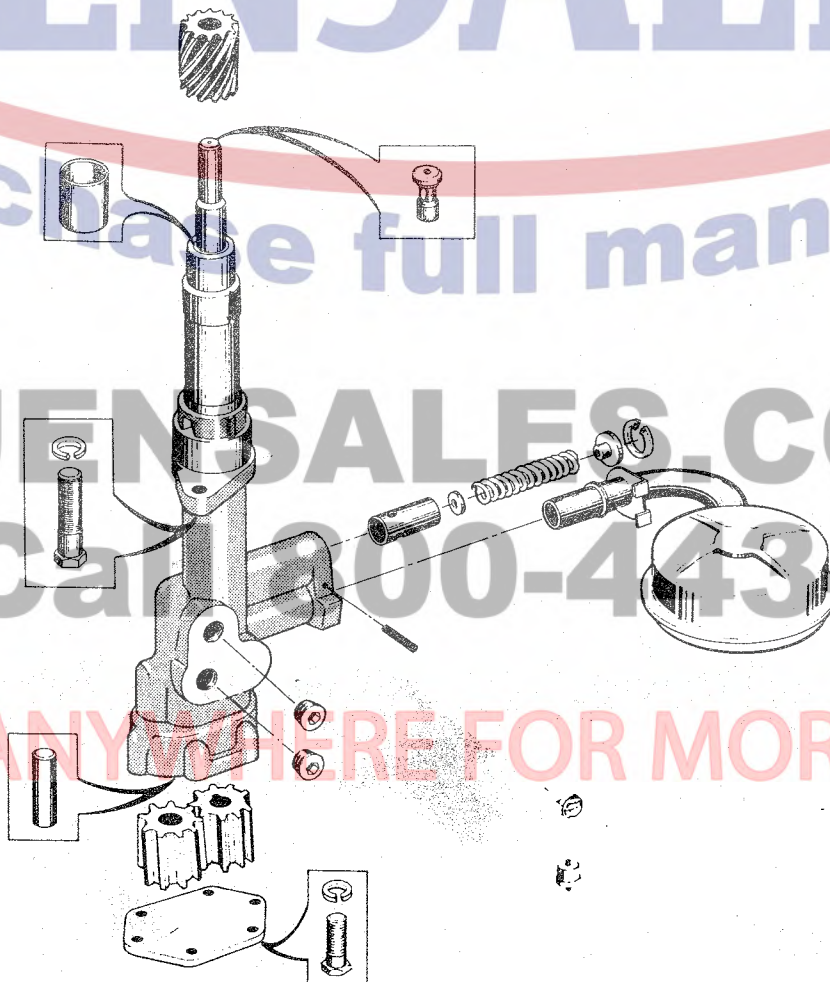
FILTER BY-PASS PISTON

"A"

.010-.030"

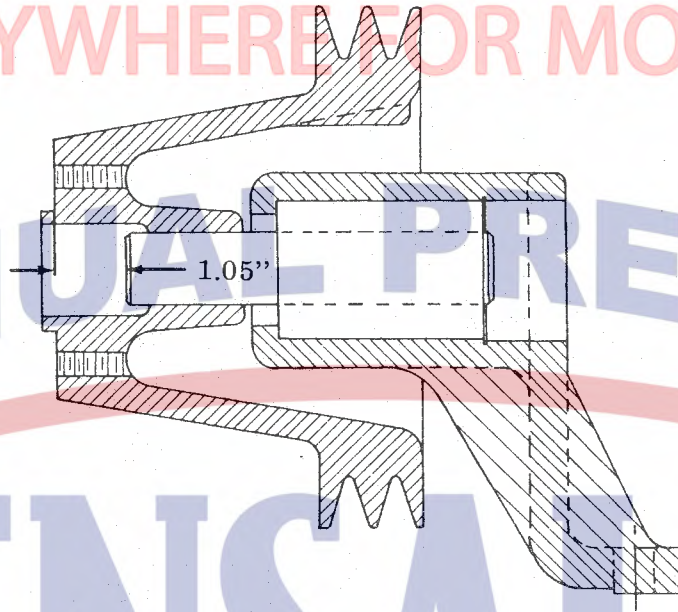
SHAFT TO BE FLUSH TO
.010 BELOW GEAR FACE.

If dimension A is 5.094" use a driven gear of .75"
in length. If dimension A is 4.640" use gear of
1.60" in length.



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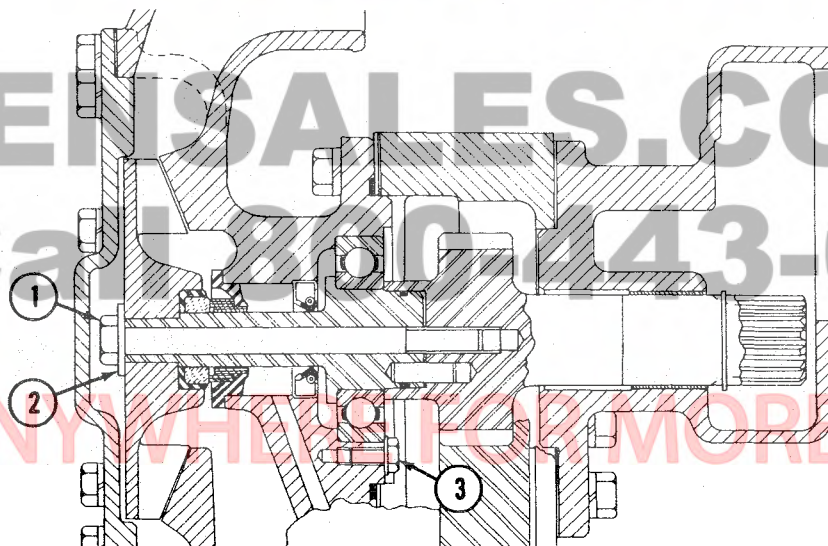
FAN HUB



FORCE TO PRESS HUB ONTO SHAFT MUST BE A MINIMUM OF 2500 POUNDS.

WATER PUMP

Use new lock bolt (50A5917) each time pump is reassembled. Be sure hardened washer is installed and tighten lock bolt to 26 ft. lbs. Retaining bolts for ball bearing are to be tightened to 9 ft. lbs.



1. Lock Bolt
2. Hardened Washer
3. Bearing Retaining Bolts