

NUMBER: 85-30

## MCM 370 TRS SPECIFICATIONS (S.N. 6721528 and ABOVE)

CIRCULATE TO:  
SERVICE-MANAGER   
PARTS MANAGER   
MECHANICS   
"Place in a Service  
Bulletin Binder"

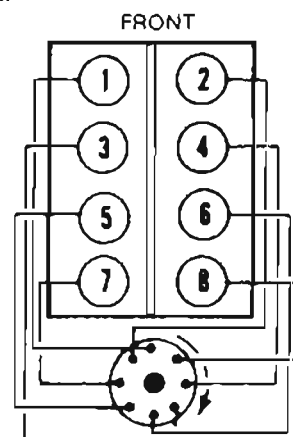
- A. Tune-Up Specifications
- B. Electrical Specifications
- C. Carburetor Specifications
- D. Internal Engine Specifications
- E. Torque Specifications
- F. Wiring Diagram
- G. Water Flow Chart

### A. TUNE-UP SPECIFICATIONS

Horsepower (Kilowatts)	370 (261.6)
Displacement	454 CID (7.4 litres)
Engine Type and Number of Cylinders	V-8
Bore	4.25" (108mm)
Stroke	4.00" (101.6mm)
Compression Ratio	8.6:1
Compression Pressure	150 PSI (1035 kPa)
Ignition	Thunderbolt IV
Spark Plug Type	AC-MR43T or Champion RV8C
Spark Plug Gap	.035" (.9mm)
Timing at Idle RPM	10° BTDC
Maximum RPM at Wide-Open-Throttle	4800-5200
Idle RPM in Forward Gear	800-850
Firing Order	1-8-4-3-6-5-7-2
Fuel Required	88 Octane Minimum (Average Octane Rating)
Fuel Pump Pressure	3-5 PSI
Electrical System	12-Volt Negative Ground
Alternator Rating	55 Amperes

Recommended Battery Rating	Min. 450 Amps Cold Cranking Amperage
Crankcase Oil Capacity with New Filter *	6 Qts. (5.7 litres)
Oil Pressure at 2000 RPM	35-70 PSI (241-483 kPa)
Valve Lash	1/4 - 1/2 Turns Down from Zero Lash
Thermostat	143° F (62° C)
Cooling System Capacity	20 Qts. (18.9 litres)
*Stern Drive Unit Oil Capacity (Approx.) (TRS)	3 Qts. (2.8 litres)
Transmission Oil Capacity	2.1 Qts. (2 litres)
Stern Drive Unit Gear Ratio (TRS)	1.5:1

\* *Approximately,  
ALWAYS use dipstick to determine exact quantity of  
oil required.*



Firing Order  
1-8-4-3-6-5-7-2

**Figure 1.**  
L.H. Rotation

## B. ELECTRICAL SPECIFICATIONS

### IGNITION SPECIFICATIONS

Engine Model	
Spark Plug Type Spark Plug Gap Timing	Refer to "Tune-Up Specifications"

Engine Model	Part No.
Coil	392-7803A4
Coil Primary Resistance (Ohms) Minimum	.60
Coil Primary Resistance (Ohms) Maximum	.80
Coil Secondary Resistance (Ohms)	9,400-11,700

### STARTER MOTOR SPECIFICATIONS

Identification Number	No Load Test					Brush Spring Tension
	Volts	Min. Amps	Max. Amps	Min. RPM	Max. RPM	
50-76965A3 (Delco-Remy) 1109485	10.6	65	115	6400	10,800	56-105 oz. (1588-2976g.)

## C. CARBURETOR SPECIFICATIONS

All Measurements are  $\pm 1/64"$  (0.4mm)

Make (Model)	Rochester (4MV)
Part No. Mercury (Rochester)	1347-7298 (17059280)
Float Level	15/64" (5.9mm)
Pump Rod Hole Location	Inner
Accelerator Pump (NOTE 1)	23/64" (9.1mm)
Air Valve Dash Pot (Air Valve Rod)	.025" (.64mm)
Vacuum Break	.080" 5/64" (2.0mm)
Air Valve Spring Wind Up	5/8 Turn (70-90 g)
Choke Coil Rod (NOTE 2)	Top of Rod Even with Bottom of Hole

Main Jet	.068"
Metering Rod (Primary)	.041"
Metering Rod (Secondary)	DA
Idle Mixture Screw, Preliminary Setting	2-3 Turns

#### NOTES:

- 1) Accelerator Pump Measurement Taken From Flame Arrestor Mounting Surface to Pump Stem With Throttle Plates Fully Closed. THIS IS DIFFERENT THAN PREVIOUS METHOD.
- 2) Choke Coil Rod Adjustment Performed With Choke Valve Completely Closed. Choke Rod in Bottom of Choke Lever Slot and Choke Coil Rod Pushed Down to End of Travel. THIS DIFFERS FROM PRIOR METHOD.

**UNIT OF MEASUREMENT**  
In. (mm)

**D. INTERNAL ENGINE SPECIFICATIONS**

**Cylinder Bore:**

Diameter		4.2451"-4.2525" (107.8255-108.013mm)	
Out of Round	Production	.001" (.025) Max.	
	Service	.002" (.05) Max.	
Taper	Production	Thrust Side	.005 (.0127) Max.
		Relief Side	.001 (.025) Max.
	Service	.001 (.025) Max.	

**Piston:**

Clearance	Production	.0045-.0065 (.1143-.1651)
	Service	.0075 (.15) Max.

**Piston Ring: (1) HI Production Limit**

Compression	Groove Side Clearance	Production	Top	.0017-.0032 (.04-.08)
			2nd	.0017-.0032 (.04-.08)
		Service	(1) + .001 (.025)	
	Gap	Production	Top	.010-.020 (.25-.5)
			2nd	.010-.020 (.25-.5)
		Service	(1) + .010 (.25)	
Oil	Groove Side Clearance	Production	.005-.0065 (.13-.15)	
		Service	(1) + .001 (.02)	
	Gap	Production	.020-.035 (.5-.85)	
		Service	(1) + .010 (.25)	

**Piston Pin:**

Diameter		.9895-.9898 (25.1333-25.1409)
Clearance	Production	.00025-.00035 (.00635-.00889)
	Service	.001 (.02) Max.
Fit in Rod		.0008-.0016 (.0203-.0406) Interference

**Crankshaft:**

Main Journal	Diameter	No. 1	2.7485-2.7494 (69.8119-69.8348)	
		No. 2, 3, 4	2.7481-2.7490 (69.8017-69.8246)	
		No. 5	2.7478-2.7488 (69.7941-69.8195)	
	Taper	Production	.0002 (.0051) Max.	
		Service	.001 (.025) Max.	
	Out of Round	Production	.0002 (.0051) Max.	
Service		.001 (.025) Max.		
Main Bearing Clearance	Production	No. 1	.0013-.0025 (.0330-.0635)	
		No. 2, 3, 4		
		No. 5	.0024-.0040 (.0610-.1016)	
	Service	No. 1	.001-.0015 (.03)	
		No. 2, 3, 4	.001-.0025 (.03-.06)	
No. 5	.0025-.0035 (.07-.08)			
Crankshaft End Play			.006-.010 (.15-.25)	
Connecting Rod Journal	Diameter		2.1985-2.1995 (55.8419-55.8673)	
	Taper	Production	.0005 (.0127) Max.	
		Service	.001 (.025) Max.	
	Out of Round	Production	.0005 (.0127) Max.	
Service		.001 (.025) Max.		
Rod Bearing Clearance	Production	.0009-.0025 (.0229-.0635)		
	Service	.003 (.07) Max.		
Rod Side Clearance			.013-.023 (.35-.55)	
Crankshaft Runout			.0015 (.0381) Max.	

**Camshaft and Drive:**

Lobe Lift ± .002" (.051mm)	Intake	.294 (7.468)
	Exhaust	.294 (7.468)
Journal Diameter		1.9482-1.9492 (49.484-49.510)
Journal Out-of-Round		.001 (.025) Max.
Camshaft Run-Out		.002 (.051) Max.
Timing Chain Deflection		3/8 (10) From Taut Position 3/4 (19) Total

**Valve System:**

Lifter Type		Hydraulic	
Rocker Arm Ratio		1.70:1	
Valve Lash (Intake & Exhaust)		1/2 Turn Down from Zero Lash	
Face Angle (Intake & Exhaust)		45°	
Seat Angle (Intake & Exhaust)		46°	
Seat Runout (Intake & Exhaust)		.002 (.051) Max.	
Seat Width	Intake	1/32-1/16 (.79-1.59)	
	Exhaust	1/16-3/32 (1.59-2.38)	
Stem Clear- ance	Production	Intake	.001-.0027 (.0254-.0686)
		Exhaust	.0012-.0029 (.0305-.0737)
	Service	Intake	.0037 (.0940)
		Exhaust	.0049 (.1245)
Valve Spring	Free Length		2.12 (53.8)
	Pressure Lbs. @ In. (NOTE 1)	Closed @ 1.88 (47.75)	74-86 Lbs. Ft. (100-116 N.m)
		Open @ 1.38 (31.75)	288-312 Lbs. Ft. (390-423 N.m)
	Installed Height		1.875 (47.6)
Damper	Free Length		1.86 (47.24)
	Approximate No. of Coils		4

NOTE 1: Test spring pressure with damper removed.

**Cylinder Head:**

Gasket Surface Flatness	.003 (.07) in 6" (152) .007 (.15) Overall Maximum
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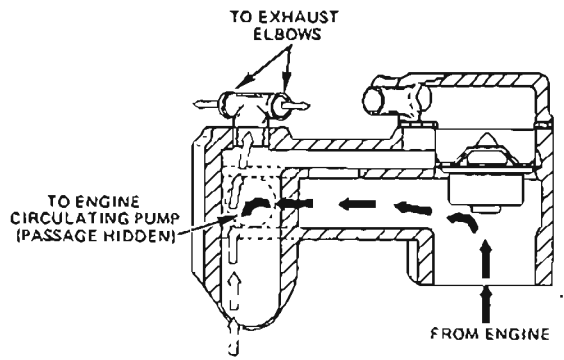
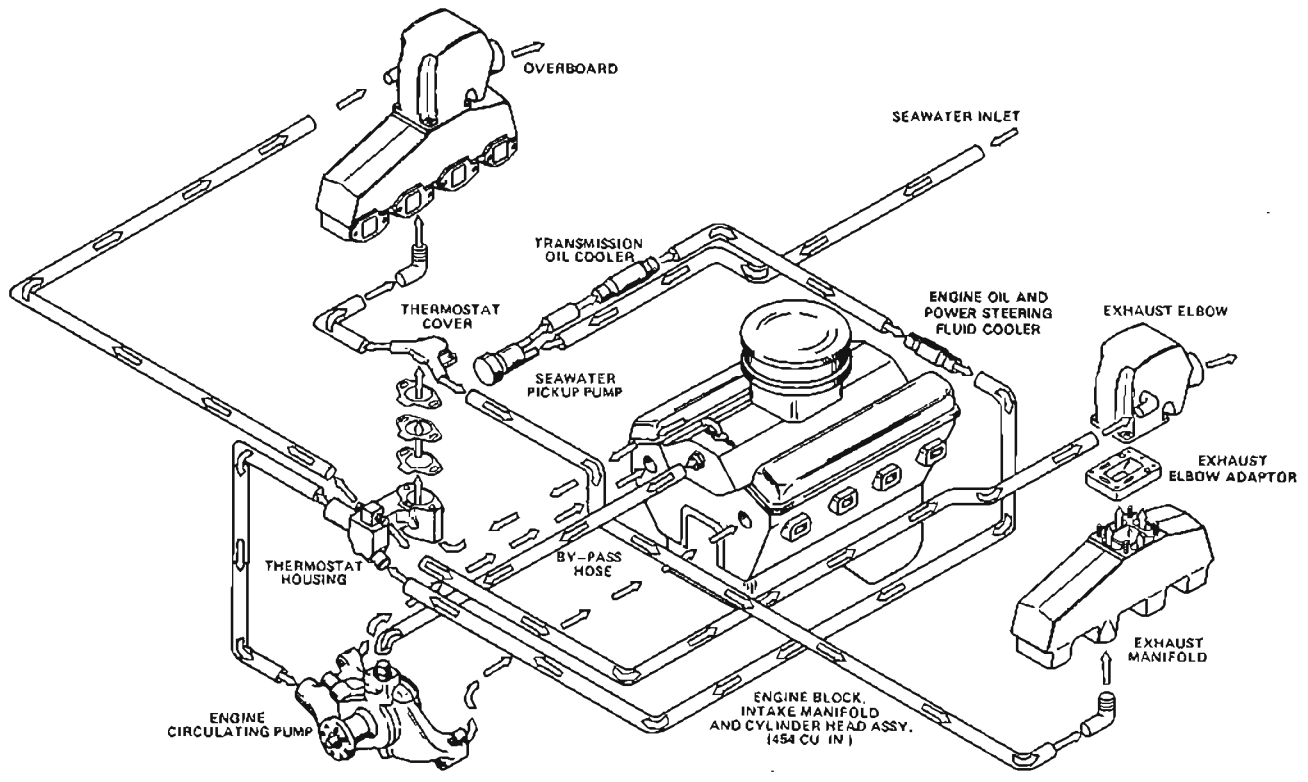
**Flywheel:**

Runout	.008 (.203) Max.
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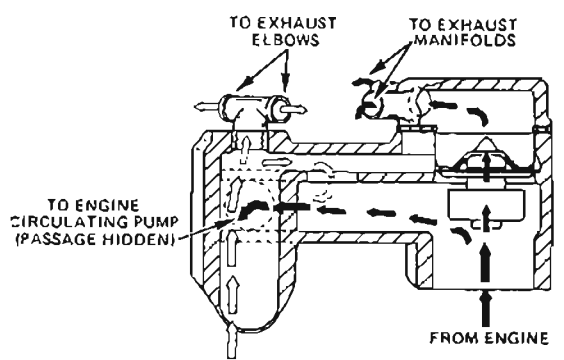
**E. TORQUE SPECIFICATIONS**

Camshaft Sprocket/Gear	25 LB. FT. (34 N.m)
Conn. Rod Cap	65 LB. FT. (88 N.m)
Crankcase Front Cover	80 LB. IN. (9 N.m)
Cylinder Head	80 LB. FT. (109 N.m)
Distributor Clamp	25 LB. FT. (34 N.m)
Exhaust Manifold (Bolts)	35 LB. FT. (48 N.m)
Exhaust Manifold (Nuts)	25 LB. FT. (34 N.m)
Flywheel	65 LB. FT. (88 N.m)
Flywheel Drive Plate	35 LB. FT. (48 N.m)
Flywheel Housing	30 LB. FT. (41 N.m)
Intake Manifold	30 LB. FT. (41 N.m)
Main Bearing Cap	110 LB. FT. (149 N.m)
Oil Filter	25 LB. FT. (34 N.m)
Oil Filter By-Pass Valve	80 LB. IN. (9 N.m)
Oil Pan to Crankcase (5/16-18)	165 LB. IN. (19 N.m)
Oil Pan to Crankcase (1/4-20)	80 LB. IN. (9 N.m)
Oil Pan Drain Plug	20 LB. FT. (27 N.m)
Oil Pump	65 LB. FT. (88 N.m)
Oil Pump Cover	80 LB. IN. (9 N.m)
Rocker Arm Cover	50 LB. IN. (5.5 N.m)
Spark Plug	180 LB. IN. (20 N.m)
Torsional Damper	85 LB. FT. (115 N.m)
Water Pump	30 LB. FT. (41 N.m)





TO EXHAUST ELBOWS  
 TO ENGINE CIRCULATING PUMP (PASSAGE HIDDEN)  
 FROM SEAWATER PICKUP PUMP (VIA OIL COOLER)  
 FROM ENGINE  
 COOLANT FLOW THROUGH THERMOSTAT HOUSING WITH THERMOSTAT CLOSED



TO EXHAUST ELBOWS  
 TO EXHAUST MANIFOLDS  
 TO ENGINE CIRCULATING PUMP (PASSAGE HIDDEN)  
 FROM SEAWATER PICKUP PUMP (VIA OIL COOLER)  
 FROM ENGINE  
 COOLANT FLOW THROUGH THERMOSTAT HOUSING WITH THERMOSTAT OPEN

**G. MCM 370 TRS Water Flow**