

# Quick Reference Data

## TUNE-UP SPECIFICATIONS (MERC 500 WITH LIGHTNING ENERGIZER SYSTEM)

Firing order	1-3-2-4
Spark plug	AC-V40FFM or Champion L77V
Spark plug gap	Not adjustable
Maximum advance	35° BTDC @ 5,200 rpm
Throttle primary pickup	7-9° BTDC
Throttle secondary pickup	@ 35° BTDC stop
Full throttle rpm	4,800-5,500 rpm
Idle rpm	550-600 rpm (3-5° ATDC) in FORWARD gear
Water pressure (at cylinder block)	3-5 psi (0.211-0.352 kg/cm²) @ 2,000 rpm

## MERC 500 MAXIMUM SPARK ADVANCE

Engine rpm @ wide-open throttle	Maximum spark advance setting
2,000-4,000	38-39° BTDC
4,000-4,800	37-38° BTDC
5,200-5,500	35° BTDC

## TUNE-UP SPECIFICATIONS (MERC 500 WITH DISTRIBUTOR-LESS IGNITION TO SERIAL NO. 4576236)

Firing order	1-3-2-4
Spark plug	AC-V40FFM or Champion L77V
Spark plug gap	Not adjustable
Maximum advance	30° BTDC @ 5,000 rpm
Throttle primary pickup	7-9° BTDC
Throttle secondary pickup	@ maximum stop (30° BTDC)
Full throttle rpm	4,800-5,500 rpm
Idle rpm	550-600 rpm (5° ATDC) in FORWARD gear
Water pressure (at cylinder block)	3-5 psi (0.211-0.352 kg/cm²) @ 2,000 rpm

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## TUNE-UP SPECIFICATIONS (MERC 45 AND 50 [4-CYLINDER] ABOVE SERIAL NO. 4576236)

Firing order	1-3-2-4
Firing sequence	90° consecutive
Spark plug	AC-V40FFK or Champion L78V
Spark plug gap	Not adjustable
Maximum advance	30° BTDC @ 5,000 rpm
Throttle primary pickup	7-9° BTDC*
Throttle secondary pickup	@ maximum stop (30° BTDC)
Full throttle rpm	5,000-5,500 rpm
Idle rpm	550-600 rpm (5° ATDC) in FORWARD gear
Water pressure (at cylinder block)	3-5 psi (0.211-0.352 kg/cm²) @ 2,000 rpm

\* With serial No. above 5632037 (U.S.), 7150562 (Canada), 8066280 (Australia) and 9265180 (Belgium): 0-2° ATDC.



**TUNE-UP SPECIFICATIONS (MERC 650 DISTRIBUTOR-LESS IGNITION)**

Firing order	1-2-3
Spark plug	AC-V40FFM or Champion L76V
Spark plug gap	Not adjustable
Maximum advance	23° BTDC @ 5,300 rpm
Throttle primary pickup	6-8° BTDC
Throttle secondary pickup	Not adjustable
Full throttle rpm	4,800-5,300 rpm
Idle rpm	550-600 rpm (6-8° ATDC) in FORWARD gear
Water pressure (at cylinder block)	3 or more psi (0.211 or more kg/cm <sup>2</sup> ) @ 2,000 rpm

**TUNE-UP SPECIFICATIONS (MERC 650 WITH DISTRIBUTOR CD IGNITION)**

Firing order	1-2-3 <sup>1</sup>
Spark plug	AC-V40FFM or Champion L77V
Spark plug gap	Not adjustable
Maximum advance	23° BTDC
Throttle primary pickup	3-5° BTDC <sup>2</sup>
Throttle secondary pickup	Not adjustable
Full throttle rpm	4,800-5,300 rpm
Idle rpm	550-600 rpm
Water pressure (at cylinder block)	3-5 psi (0.211-0.352 kg/cm <sup>2</sup> ) @ 2,000 rpm

1. Firing order changed to 1-3-2 above serial No. 5467466 (U.S.), 7135987 (Canada), 8063334 (Australia) and 9238105 (Belgium).
2. Below serial No. 3552906, 0-2° BTDC.

**TUNE-UP SPECIFICATIONS  
(MERC 700/70 [PRIOR TO 1984]/60/50 [3-CYLINDER] WITH FLYWHEEL CD IGNITION)**

Firing order	1-2-3*
Spark plug	AC-V40FFM or Champion L76V
Spark plug gap	Not adjustable
Maximum advance	23° BTDC @ 5,500 rpm
Throttle primary pickup	Not adjustable
Throttle secondary pickup	Maximum spark (static setting)
Full throttle rpm	5,000-5,500 rpm
Idle rpm	650-750 rpm (6-8° ATDC) in FORWARD gear
Water pressure (at cylinder block)	3 or more psi (0.211 or more kg/cm <sup>2</sup> ) @ 2,000 rpm

\* Firing order changed to 1-3-2 above serial No. 5467466 (U.S.), 7135987 (Canada), 8063334 (Australia) and 9238105 (Belgium).

**TUNE-UP SPECIFICATIONS (1987-ON MERC 70, 80 AND 90)**

Firing order	1-3-2
Spark plug	NGK-BUHW-2, Champion L78V or AC-V40FFK
Spark plug gap	Not Adjustable
Maximum advance	
Cranking	
Models 70 and 80 (Prior to serial No. B239242)	24° BTDC

(continued)



**TUNE-UP SPECIFICATIONS (1987-ON MERC 70, 80 AND 90) (continued)**

Models 70 and 80 (After serial No. B239241)	28° BTDC
Model 90	28° BTDC
Running	
Models 70 and 80 (Prior to serial No. B239243)	22° BTDC
Models 70 and 80 (After serial No. B239241)	26° BTDC
Model 90	26° BTDC
Idle timing	0-4° BTDC
Idle rpm in forward gear	650-700 rpm
Full throttle rpm	
Models 70 and 80	4750-5250 rpm
Model 90	5000-5500 rpm

**TUNE-UP SPECIFICATIONS (MERC 850 WITH DISTRIBUTOR CD IGNITION)**

Firing order	1-3-2-4
Spark plug	AC-V40FFM or Champion L76V
Spark plug gap	Not adjustable
Maximum advance	27° BTDC
Throttle primary pickup	3-5° BTDC
Throttle secondary pickup	27° BTDC
Full throttle rpm	4,800-5,500 rpm
Idle rpm	550-650 rpm
Water pressure (at cylinder block)	2-5 psi (0.141-0.352 kg/cm <sup>2</sup> ) @ 2,000 rpm

**TUNE-UP SPECIFICATIONS  
(MERC 75/80 [PRIOR TO 1984] 800/850 WITH DISTRIBUTOR-LESS IGNITION)**

Firing order	1-3-2-4
Spark plug	AC-V40FFK or Champion L78V
Spark plug gap	Not adjustable
Maximum advance	27° BTDC
Throttle primary pickup	2° BTDC-2° ATDC (1)
Throttle secondary pickup	Not adjustable
Full throttle rpm	5,000-5,500 rpm
Idle rpm	550-650 rpm (5-8° ATDC) in FORWARD gear
Water pressure (at cylinder block)	2-5 psi (0.141-0.352 kg/cm <sup>2</sup> ) @ 2,000 rpm
* Below serial No. 4423112, 2-4° BTDC.	



**TUNE-UP SPECIFICATIONS**  
**(MERC 900, 1150, 1400, 1500 AND 1500XS WITH DISTRIBUTOR CD IGNITION)**

Firing order	1-4-5-2-3-6
Spark plug	AC-V40FFM or Champion L76V
Spark plug gap	Not adjustable
Maximum advance	21° BTDC
Throttle primary pickup	4-6° BTDC
Throttle secondary pickup	Not adjustable
Full throttle rpm	
Merc 900	4,500-5,000 rpm
Merc 1150	5,000-5,500 rpm
Merc 1400, 1500	5,300-5,800 rpm
Merc 1500 XS	5,800-6,300 rpm
Idle rpm	550-650 rpm in FORWARD gear
Water pressure (at cylinder block)	2-5 psi (0.141-0.352 kg/cm <sup>2</sup> ) @ 2,000 rpm

**TUNE-UP SPECIFICATIONS**  
**(MERC 90-140 HP [6-CYLINDER] WITH DISTRIBUTOR-LESS IGNITION)**

Firing order	1-4-5-2-3-6
Spark plug	AC-V40FFM or Champion L76V
Spark plug gap	Not adjustable
Maximum advance	18° BTDC*
Throttle primary pickup	4-6° BTDC
Throttle secondary pickup	
Merc 90	1-3° BTDC
Merc 115	5-7° ATDC
Merc 140	4-6° ATDC
Full throttle rpm	
Merc 90	4,500-5,000 rpm
Merc 115	5,000-5,500 rpm
Merc 140	5,300-5,800 rpm
Idle rpm	550-650 rpm in FORWARD gear
Water pressure (at cylinder block)	2-5 psi (0.141-0.352 kg/cm <sup>2</sup> ) @ 2,000 rpm

\* 20° @ cranking speed.

**TUNE-UP SPECIFICATIONS (1988-ON MERC 100 AND 1989 MERC 115)**

Firing order	1-3-2-4
Spark plug	NGK BUHW, Champion L76V or AC-V40FFM
Spark plug gap	Not adjustable
Maximum advance	
Cranking	
Model 100	27° BTDC
Model 115	25° BTDC
Running	23° BTDC
Idle timing	2-4° BTDC
Idle rpm in forward gear	
Model 100	600-700 rpm
Model 115	650-700 rpm
Full throttle rpm	4,750-5,250 rpm
Water pressure (at cylinder block)	1-5 psi @ 5,000 rpm





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