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REF: Oiling & Lubrication

Transmission \ Primary Oil

About JASO Certifications

- JASO introduced the MA and MB oil specification to distinguish between friction modified and non friction modified engine oils. Most four-stroke motorcycles with wet clutches need a JASO MA oil. ¹⁾
- The JASO MA - MB range:

	JASO MA	JASO MB
Dynamic Friction Characteristic Index (DFI)	≥ 1.45 and < 2.5	≥ 0.5 and < 1.45
Static Friction Characteristic Index (SFI)	≥ 1.15 and < 2.5	
Stop Time Index (STI)	≥ 1.55 and < 2.5	≥ 0.5 and < 1.55

- The JASO MA range is further divided into 2 distinct ranges - JASO MA1 and JASO MA2:

	JASO MA1	JASO MA2
Dynamic Friction Characteristic Index (DFI)	≥ 1.45 and < 1.8	≥ 1.8 and < 2.5
Static Friction Characteristic Index (SFI)	≥ 1.15 and < 1.7	≥ 1.7 and < 2.5
Stop Time Index (STI)	≥ 1.55 and < 1.9	≥ 1.9 and < 2.5

Transmission / Primary Oil Capacities

1957-1990 ^{2) 3) 4) 5)}	1.5 pints (24 oz) (710 ml)
1991-1992 ⁶⁾	40 ounces (1183 ml)
1993-1996, 1998, 2004 ^{7) 8) 9) 10)}	32 oz (946 ml)

- Discrepancy in the 1991 FSM. It shows 1.5 pints of oil for primary / transmission. ¹¹⁾ 1991-1992 FSM corrected the 1991 book showing 40 oz for both years. ¹²⁾
- Note that for 1994-later, the manual says "Verify that lubricant level is even with bottom of clutch diaphragm spring." Not higher or lower, but even with the diaphragm spring. It also includes this warning: "Do not overfill the primary chaincase with lubricant. Overfilling may cause rough clutch engagement and incomplete disengagement (or clutch drag)."

When to Check/ Change Transmission Fluid

HD Transmission Oil Recommendations	Check Change Only If Needed	Change
1959-1978 ¹³⁾ ¹⁴⁾	Every 1,000 miles	Every 5,000 miles or 1 year, Every Spring or Fall
1979-1985 ¹⁵⁾		After first 500 miles, Every 5,000 miles, Spring or Fall
1986-2003 ¹⁶⁾ ¹⁷⁾ ¹⁸⁾	After first 3,000 miles, Every 2,500 miles after oil changes	After first 500 miles Every 5,000 miles after
2004 ¹⁹⁾		After first 1,000 miles, At first 5,000, Every 5,000 miles after

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<http://www.oilspecifications.org/jaso.php>

²⁾

1959-1969 HD Sportster FSM pg 1A-3

³⁾

1970-1978 HD Sportster FSM pg 1-1

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1979-1985 HD Sportster FSM pg 2-1

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1986-1990 HD Sportster FSM pg 2-1

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1991-1992 HD Sportster FSM pg 2-1

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1993-1994 HD Sportster FSM pg 2-1

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1995-1996 HD Sportster FSM pg 2-1

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1998 HD Sportster FSM pg 2-1

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2004 HD Sportster FSM pg 2-1

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1991 HD Sportster FSM pg 2-1

¹³⁾

1959-1969 HD Sportster FSM pg 1B-6

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1970-1978 HD Sportster FSM pg 1-5

¹⁵⁾

1979-1985 HD Sportster FSM pg 1-2

¹⁶⁾

1986-1990 HD Sportster FSM pg 1-2

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1991-1992 HD Sportster FSM pg 1-2

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1993-1994 HD Sportster FSM pg 1-2

19)

2004 HD Sportster FSM pg 1-7

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