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IH: Engine Mechanicals - Sub-09J

Lower Front Motor Mount Bolt Sizes and Lengths from Parts Catalogs

Use the spacers and single bolts of the correct length.

This keeps the frame tubes together around the sandwiched engine cases. Very important! ¹⁾

Bolt lengths from parts catalogs (all have 3/8"x24 threads):

As you can see below, the lengths are far from being standard length and those lengths changed depending on what parts catalog you reference.

These are general guidelines for bolt sizes:

The front motor mount uses 3 different size bolt (lengths) for the 4 holes. ²⁾

The upper front and lower front holes (attaching to the frame) use the longest bolts.

The upper rear (through the case) uses the shortest.

The lower rear (through the case) uses the remaining middle length one.

If you use any other length bolts (in the case of the bolt going into the threaded engine plate at the top rear) use the 5-3/16" long bolt.

A longer bolt there will run into the generator mount and the lower one gets close to the oil pressure switch. ³⁾

- **1957-1975:** ^{4) 5) 6)}

- Top rear bolt (1), 5-3/16" long (16235-52) grade 5 zinc.
Part number changed to (16235-52A) in the -78B catalog (issued in 1989) but the length stayed the same in the book.
Correct length is 3/8"x24x5-1/4".
- Bottom rear bolt (1), 5-7/16" long (16236-52) grade 5 zinc.
Changed to 5-1/2" long (4413) in 1973 and sold for 54-76 models from the -78B catalog (issued in 1989).
- Front bolts (2), 6-13/16" long (16237-57) grade 5 zinc.
'57 to '76 in the -78B catalog.

- **1976-1978:** ^{7) 8) 9) 10)}

- Top rear bolt (1), 5-3/16" long (16235-52) grade 5 zinc.
Changed to 5-1/4" long in -78A catalog (issued in 1981) for 77-78 models with the same part number for both lengths (16235-52).
The correct part number is (16235-52A)
- Bottom rear bolt (1), 5-1/2" long (4413) grade 5 zinc.
- Front bolts (2), 6-13/16" long (16237-57) grade 5 zinc.

- **1979:** ^{11) 12) 13)}
 - Top rear bolt (1), 6-13/16" long (16237-57) grade 5 zinc.
Both the -79 and -79A parts books show a quantity of (3) for this size bolt (same size as the front two) instead of the 5-3/16" bolt.
Changed in 1980 to 5-1/4" long which is part # (16235-52A) and correct for 1979 also.
 - Bottom rear bolt (1), 5-1/2" long (4413) grade 5 zinc.
 - Front bolts (2), 6-13/16" long (16237-57) grade 5 zinc.
- **1980-E1984:** (all lengths sold for 79-85 models) ^{14) 15) 16) 17) 18) 19)}
 - Top rear bolt (1), 5-1/4" long (16235-52) grade 5 zinc.
Shorter bolt with same part number as the longer bolt in 1978.
Part number changed to (16235-52A) in the -85A catalog (issued in 1990) but the length stayed the same in the book.
The correct part number is (16235-52A) at 5-1/4" long.
 - Bottom rear bolt (1), 5-1/2" long (4413) grade 5 zinc.
 - Front bolts (2), 6-13/16" long (16237-57) grade 5 zinc.

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¹⁾

piniongear of the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/118347-front-motor-mounts?t=1145463>

²⁾

Scuba10jdl of the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/192227-engine-in-frame-bracketscrews-tightening-order?t=2056655>

³⁾

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<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/97896-motor-mount-bolts-need-specs/page2?t=829078&page=2>

⁴⁾

1953-1963 HD Sportster and KH Model Parts catalog (99451-63) pg 11

⁵⁾

1954-1976 HD Sportster XLH/XLCH-1000 parts catalog (99451-76A) pg 11

⁶⁾ , ⁹⁾

1978 HD Sportster XLH/XLCH Parts catalog (99451-78A) pg 11

⁷⁾

1954-1976 HD Sportster XLH/XLCH-1000 Parts Catalog (99451-76A) pg 11

⁸⁾

1978 HD Sportster XLH/XLCH Parts catalog supplement

¹⁰⁾

1978 HD Sportster XLH/XLCH Parts catalog (99451-78B) pg 11

¹¹⁾

1979 HD Sportster XLH/XLCH/XLS-1000 parts catalog 99451-79 pg 11

¹²⁾

1979 HD Sportster XLH/XLCH/XLS-1000 parts catalog 99451-79A pg 11

[13\)](#)

1979-1985 Sportster XL parts catalog 99451-85A pgs 13,15

[14\)](#)

1979-1980 HD Sportster XLH/XLCH/XLS-1000 parts catalog 99451-80 pg 11

[15\)](#)

1979-1981 HD Sportster XLH/XLCH/XLS-1000 parts catalog 99451-81 pgs 11,13

[16\)](#)

1979-1982 HD Sportster XL Model parts catalog 99451-82 pg 13

[17\)](#)

1979-1983 HD Sportster XL Model parts catalog 99451-83 pg 13

[18\)](#)

1979-1984 HD Sportster XL Model parts catalog 99451-84 pgs 13,15

[19\)](#)

1979-1985 HD Sportster XL Model parts catalog 99451-85 pgs 13,15

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