

Table of Contents

- IH: General Technical Information** 1
- 1970 - 1977** 1
- 1970 - 1977 Service Intervals** 1
 - Regular Service Interval* 1
 - Service Interval Engine and Transmission* 2
- 1970 - 1977 Sportster Fastener Torque Requirements** 3
 - Chassis* 3
 - Engine* 3
 - Electrical* 3
- 1970 - 1977 Sportster Engine Specifications** 4
 - Valves* 4
 - Rocker Arm* 4
 - Piston* 4
 - Connecting Rod* 4
 - Oil Pump Pressure* 4
 - Tappets* 5
 - Cam Gear Timing* 5
 - Gearcase* 5
 - Flywheel Assembly* 5
 - Sprocket Shaft Bearing* 5
 - Pinion Shaft Bearing* 6
 - Ignition Timing* 6

[Go To Technical Menu](#)

IH: General Technical Information

1970 - 1977

1970 - 1977 Service Intervals

Regular Service Interval

| | Grease | Oil | Service |
|------------------|--------|------------|--|
| Every 1000 Miles | | Rear Chain | <ul style="list-style-type: none">• Air Cleaner• Battery Rear• Rear Chain Adjustment• Gasoline Valve, lines and fittings• Check fastener tightness |

| | | | |
|-------------------|---|--|---|
| Every 2000 Miles | <ul style="list-style-type: none"> • Rear Brake Shaft • Front Brake Shaft • Rear Brake Cross-over Shaft (1974 & earlier) • Clutch Release Worm (1970) • Foot Shift Lever • Seat Bar Roller and Bolt • Kick Starter Shaft • Rear Wheel Hub • Speedometer Drive (1973 & later) • Foot Shift Crossover Shaft (1975-76) | <ul style="list-style-type: none"> • Rear Brake Rod Clevis • Front Brake Cable Clevis • Clutch Hand Lever • Brake Hand Lever • Clutch Control Cable • Front Brake Cable • Throttle Control Cable • Seat Post (saddle only) | <ul style="list-style-type: none"> • Tappet Adjustment • Clutch Adjustment • Brake Adjustment • Oil Filter • Front Chain Adjustment • Rear Chain Oiler (1976 & earlier) • Circuit Breaker Points |
| Every 5000 Miles | <ul style="list-style-type: none"> • Throttle Control Spiral • Circuit Breaker Camshaft • Front Wheel Hub (1964 & earlier) • Speedometer and Tachometer Cables | | |
| Every 10000 Miles | <ul style="list-style-type: none"> • Repack Rear Fork Pivot Bearings • Repack Wheel Bearings | | |
| Weekly | | | <ul style="list-style-type: none"> • Check Tires and Battery |

1)

[Go To Technical Menu](#)

Service Interval Engine and Transmission

| | 300 Miles | 1000 Miles | 2000 Miles | 5000 Miles or 1 Year | Spring and Fall |
|------------------|-----------|------------|------------|----------------------|-----------------|
| Engine Oil | Check | Check | Change | | Change |
| Transmission Oil | | Check | | Change | Change |

2)

POC for this page — [Bert Linson](#) 2016/01/20 20:03

1970 - 1977 Sportster Fastener Torque Requirements

Chassis

- Axle Nut: 50 ft-lbs / 67.79 Nm
- Brake Disc Mounting Screw: 35 ft-lbs / 47.45 Nm (1973)
- Brake Disc Mounting Screw: 10 ft-lbs / 13.5 Nm (1974 & later)
- Fork Stem Pinch Bolt: 20 - 25 ft-lbs / 27.11 - 33.89 Nm
- Handlebar Clamping Bolt: 20 ft-lbs / 27.11 Nm
- Front Caliper Bolt: 35 ft-lbs / 47.45 Nm
- Front Brake Disc Bolt: 35 ft-lbs / 47.45 Nm

Engine

- Gear Shaft Nut: 100 - 120 ft-lbs / 135.6 - 162.7 Nm
- Sprocket Shaft Nut: 100 - 120 ft-lbs / 135.6 - 162.7 Nm
- Crank Pin Nut: 150 ft-lbs / 203.37 Nm
- Rocker Arm Cover Screw: 20 ft-lbs / 27.11 Nm
- Cylinder Head Bolt: 65 ft-lbs / 88.12 Nm
- Carburetor (Tillotson) Inlet Seat Assembly: 40 - 45 in-lbs / 4.519 - 5.084 Nm
- Carburetor (Tillotson) Accelerator Pump Channel Plug: 23 - 28 in-lbs / 2.598 - 3.163
- Clutch Hub Nut (1971 & later): 150 ft-lbs / 203.37 Nm
- Gear Cover Screws, Chain Cover Screws, and Oil Pump: 100 in-lbs / 11.298 Nm

Electrical

- Spark Plug: 20 ft-lbs / 27.11 Nm
- Starter Motor Thru Bolt (Prestolite): 20 - 25 in-lbs / 27.11 - 33.89 Nm
- Starter Motor Thru Bolt (Hitachi): 20 - 25 in-lbs / 27.11 - 33.89 Nm

[Go To Technical Menu](#)

1970 - 1977 Sportster Engine Specifications

Valves

- Fit in Guide (EX): .0025 - .0045 in
- Fit in Guide (IN): .0015 - .0035 in
- Spring (outer)
 - 55 - 66 lbs. @ 1-9/32 in. (valve closed)
 - 152 - 168 lbs. @ 15/16 in. (valve open)
- Spring (inner)
 - 30 - 36 lbs. @ 1-3/32 in. (valve open)
 - 76 - 88 lbs. @ 3/4 in. (valve closed)
- Spring free length:
 - 1-1/2 in. (outer)
 - 1-23/64 in. (inner)

Rocker Arm

- Fit in bushing: .001 - .0025 in. Loose

Piston

- Fit in cylinder: .003 - .004 in. loose
- Ring Gap: .015 - .025 in.
- Ring side clearance: .0035 - .005 in.
- Piston pin fit: Light hand press fit at 70 degrees Fahrenheit.

Connecting Rod

- Piston pin fit: .0008 - .001 in. loose
- End play between flywheels: .005 - .001 in.
- Fit on crank pin: .0005 - .001 in. loose

Oil Pump Pressure

At 60 MPH in high gear (oil hot).

- Minimum: 10 lbs. / sq. in.
- Maximum: 20 lbs. / sq. in.

Tappets

- Guide fit: .0005 - .001 in. press
- Fit in guide: .0005 - .001 in. loose
- Roller fit: .0005 - .001 in.
- Roller end clearance: .008 - .010 in.
- Tappet clearance: Just free (no lash) - Engine cold

Cam Gear Timing

- Intake
 - Opens: 79 - 85 degrees BTC
 - Closes 79 - 85 degrees ABC
- Exhaust
 - Opens: 81 - 89 degrees BBC
 - Closes: 76 - 84 degrees ATC

Gearcase

- Intermediate gear shaft
 - In bushing: .0005 - .001 in.
- Cam gear shaft in bushing: .0005 - .002 in.
- Cam gear shaft
 - In needle bearing: .0005 - .003 in.
- Cam gear end play
 - 1976 & earlier: .001 - .005 in.
 - 1977 & later: .003 - .007 in.
- Cam gear backlash: .000 - .0005 in.

Flywheel Assembly

- Gear shaft nut torque: 150 ft-lbs
- Sprocket shaft nut torque: 150 ft-lbs
- Crank pin nuts torque: 150 ft-lbs
- Runout (flywheels): .003 in. maximum at rim
- Runout (main shafts): .002 in. maximum

Sprocket Shaft Bearing

- Cup fit in crankshaft: .0005 - .0025 in. tight
- Cone fit on shaft: .0002 - .0015 in. tight

- End play: .001 - .007 in.

Pinion Shaft Bearing

- Shaft fit in roller bearing: .0005 - .0015 in.
- Shaft fit in cover bushing: .0005 - .0015 in.

Ignition Timing

- Breaker point gap setting
 - 1970: .020 in.
 - 1971 & later: .018 in.
- Dwell
 - 1970 & 1971: 90 degrees @ 2000 rpm
 - 1972 & later: 140 degrees @ 2000 rpm
- Spark plug gap setting: .025 - .030 in.
- Ignition timing - Advanced
 - 1971 & earlier: 45 degrees (11/16 in. BTC)
 - 1972 % later: 40 degrees (17/32 in. BTC)
- Ignition timing - Retarded
 - 1971 & earlier: 15 degrees (5/64 in BTC)
 - 1972 & later: 10 degrees (1/32 in BTC)

Go To Technical Menu

1) 2)

Harley Davidson 1970 - 1977 Service Manual

From:

<http://www.sportsterpedia.com/> - **Sportsterpedia**

Permanent link:

<http://www.sportsterpedia.com/doku.php/techtalk:ih:general02>

Last update: **2021/05/26 17:15**

