



2009 Softail Models Service Manual

99482-09

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MAINTENANCE

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NOTES



FASTENER TORQUE VALUES

FASTENER TORQUE VALUES IN THIS CHAPTER

The table below lists torque values for all fasteners presented in this chapter.

FASTENER	TORQUE VALUE		NOTES
Adjuster screw locknut	72-120 in-lbs	8.1-13.6 Nm	1.12 CLUTCH, Adjustment
Air cleaner bracket screws	40-60 in-lbs	4.5-6.8 Nm	1.8 AIR CLEANER AND EXHAUST SYSTEM, Installation
Air cleaner cover bracket screw	40-60 in-lbs	4.5-6.8 Nm	1.3 MAINTENANCE SCHEDULE, General
Air cleaner cover screw	36-60 in-lbs	4.1-6.8 Nm	1.3 MAINTENANCE SCHEDULE, General
Air cleaner cover screw	36-60 in-lbs	4.1-6.8 Nm	1.8 AIR CLEANER AND EXHAUST SYSTEM, Installation
Battery cable to battery fasteners	60-72 in-lbs	6.8-8.1 Nm	1.18 BATTERY MAINTENANCE, Installation and Connection
Battery cable to battery fasteners	60-72 in-lbs	6.8-8.1 Nm	1.18 BATTERY MAINTENANCE, Installation and Connection
Battery terminal fastener	60-72 in-lbs	6.8-8.1 Nm	1.3 MAINTENANCE SCHEDULE, General
Bearing retainer	25-35 in-lbs	2.8-4.0 Nm	1.23 ROCKER BEARINGS: FLSTSB, Inspection
Bearing retainer	25-35 in-lbs	2.8-4.0 Nm	1.23 ROCKER BEARINGS: FLSTSB, Inspection
Bearing retainer jam nut	95-105 ft-lbs	128.8-142.4 Nm	1.23 ROCKER BEARINGS: FLSTSB, Inspection
Bleeder valve	80-100 in-lbs	9.0-11.3 Nm	1.16 BLEEDING BRAKES, Procedure
Brake bridge bolt/pad pin, front caliper	15-16 ft-lbs	20.3-22.6 Nm	1.17 BRAKE PADS AND DISCS, Brake Pad Replacement
Chrome aluminum laced wheel spoke nipple	55 in-lbs	6.2 Nm	1.3 MAINTENANCE SCHEDULE, General
Clutch adjustment screw locknut	72-120 in-lbs	8-14 Nm	1.3 MAINTENANCE SCHEDULE, General
Clutch cover screws	84-108 in-lbs	9.5-12.2 Nm	1.12 CLUTCH, Adjustment
Clutch inspection cover fastener torque	84-108 in-lbs	10-12 Nm	1.3 MAINTENANCE SCHEDULE, General
Clutch inspection cover screw	84-108 in-lbs	9.5-12.2 Nm	1.10 PRIMARY CHAIN, Changing Primary Chain-case Lubricant
Drain plug	14-21 ft-lbs	19.0-28.5 Nm	1.6 ENGINE OIL AND FILTER, Changing Oil and Filter
Engine oil drain plug	14-21 ft-lbs	19-28 Nm	1.3 MAINTENANCE SCHEDULE, General
Fork drain screw, all models but FXCW/C	52-78 in-lbs	5.9-8.9 Nm	1.24 FRONT FORK OIL, Replacing Fork Oil
Fork drain screw, FXCW/C	12-18 in-lbs	1.4-2.0 Nm	1.24 FRONT FORK OIL, Replacing Fork Oil
Fork stem nut	70-80 ft-lbs	94.9-108.4 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FXST, FXSTB, FXSTC, FXCW/C
Fork stem nut	70-80 ft-lbs	94.9-108.4 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FXST, FXSTB, FXSTC, FXCW/C
Fork tube cap	40-60 ft-lbs	54.2-81.3 Nm	1.24 FRONT FORK OIL, Replacing Fork Oil
Front caliper mounting bolt	28-38 ft-lbs	38.0-51.5 Nm	1.17 BRAKE PADS AND DISCS, Brake Pad Replacement
Front caliper mounting bolt	28-38 ft-lbs	38.0-51.5 Nm	1.17 BRAKE PADS AND DISCS, Brake Pad Replacement

FASTENER	TORQUE VALUE		NOTES
Front engine mounting nuts	70-80 ft-lbs	94.9-108.5 Nm	1.28 ENGINE MOUNTS, Inspection
Handlebar clamp screw torque	12-15 ft-lbs	16.3-20.3 Nm	1.3 MAINTENANCE SCHEDULE, General
Handlebar switch housing screw	35-45 in-lbs	4-5 Nm	1.3 MAINTENANCE SCHEDULE, General
Handlebar switch housing screw	35-45 in-lbs	4.0-5.1 Nm	1.15 THROTTLE CABLES, Cable Inspection, Lubrication and Adjustment
Headlamp horizontal adjustment fastener	30-35 ft-lbs	40.7-47.5 Nm	1.26 HEADLAMP ALIGNMENT, Headlamp Adjustment
Headlamp vertical adjusting bolt	25-30 ft-lbs	33.9-40.7 Nm	1.26 HEADLAMP ALIGNMENT, Headlamp Adjustment/FXSTC, FXCW/C
Headlamp vertical adjusting bolt	25-35 ft-lbs	33.9-47.5 Nm	1.26 HEADLAMP ALIGNMENT, Headlamp Adjustment/FLSTSB
Headlamp vertical adjusting bolt	35-45 ft-lbs	47.5-61.0 Nm	1.26 HEADLAMP ALIGNMENT, Headlamp Adjustment/All but FLSTSB, FXSTC, FXCW/C
Lower fork stem pinch bolts	30-35 ft-lbs	40.7-47.5 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FLST, FLSTC, FLSTF, FLSTN
Lower fork stem pinch bolts	30-35 ft-lbs	40.7-47.5 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FLST, FLSTC, FLSTF, FLSTN
Lower triple tree pinch bolt	30-35 ft-lbs	40.7-47.5 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FXST, FXSTB, FXSTC, FXCW/C
Lower triple tree pinch bolt	30-35 ft-lbs	40.7-47.5 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FXST, FXSTB, FXSTC, FXCW/C
Master cylinder reservoir cover fastener	6-8 in-lbs	0.7-0.9 Nm	1.3 MAINTENANCE SCHEDULE, General
Master cylinder reservoir cover screw	6-8 in-lbs	0.7-0.9 Nm	1.7 BRAKES, Fluid Inspection
Master cylinder reservoir cover screw	6-8 in-lbs	0.7-0.9 Nm	1.17 BRAKE PADS AND DISCS, Brake Pad Replacement
Master cylinder reservoir cover screw	6-8 in-lbs	0.7-0.9 Nm	1.17 BRAKE PADS AND DISCS, Brake Pad Replacement
Master Cylinder Reservoir Cover Screw	6-8 in-lbs	0.7-0.9 Nm	1.16 BLEEDING BRAKES, Procedure
Mounting bolt and slider pin, rear caliper	10-14 ft-lbs	13.6-18.9 Nm	1.17 BRAKE PADS AND DISCS, Brake Pad Replacement
Pad pin, rear caliper	80-120 in-lbs	9.0-13.6 Nm	1.17 BRAKE PADS AND DISCS, Brake Pad Replacement
Primary chaincase drain plug	14-21 ft-lbs	19-28 Nm	1.3 MAINTENANCE SCHEDULE, General
Primary chaincase drain plug	14-21 ft-lbs	19.0-28.5 Nm	1.10 PRIMARY CHAIN, Changing Primary Chain-case Lubricant
Rear axle nut	95-105 ft-lbs	128.8-142.4 Nm	1.14 REAR BELT DEFLECTION, Adjustment
Rear fork pivot nut	90-110 ft-lbs	122.0-149.1 Nm	1.28 ENGINE MOUNTS, Inspection
Rigid fork pivot stud	25-35 in-lbs	2.8-4.0 Nm	1.23 ROCKER BEARINGS: FLSTSB, Inspection
Rocker pivot stud acorn nut	45-50 ft-lbs	61.0-67.8 Nm	1.23 ROCKER BEARINGS: FLSTSB, Inspection
Spark plug	12-18 ft-lbs	16-24 Nm	1.3 MAINTENANCE SCHEDULE, General
Spark plug	12-18 ft-lbs	16.3-24.4 Nm	1.20 SPARK PLUGS, Inspection
Spoke nipple	55 in-lbs	6.2 Nm	1.9 TIRES AND WHEELS, Wheel Spokes
Starter nut	70-90 in-lbs	7.9-10.2 Nm	1.18 BATTERY MAINTENANCE, Installation and Connection
Steel laced wheel spoke nipple	55 in-lbs	6.2 Nm	1.3 MAINTENANCE SCHEDULE, General
Transmission drain plug	14-21 ft-lbs	19-28 Nm	1.3 MAINTENANCE SCHEDULE, General

FASTENER	TORQUE VALUE		NOTES
Transmission drain plug	14-21 ft-lbs	19.0-28.5 Nm	1.11 TRANSMISSION LUBRICANT, Changing Transmission Lubricant
Transmission filler plug	25-75 in-lbs	2.8-8.5 Nm	1.11 TRANSMISSION LUBRICANT, Changing Transmission Lubricant
Transmission filler plug torque	25-75 in-lbs	3-9 Nm	1.3 MAINTENANCE SCHEDULE, General
Upper engine mounting to cylinder head bolts	35-40 ft-lbs	47.5-54.3 Nm	1.28 ENGINE MOUNTS, Inspection
Upper engine to frame mounting bolt	45-50 ft-lbs	61.0-67.8 Nm	1.28 ENGINE MOUNTS, Inspection
Upper fork stem pinch bolt	25-30 ft-lbs	33.9-40.7 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FLST, FLSTC, FLSTF, FLSTN
Upper fork stem pinch bolt	25-30 ft-lbs	33.9-40.7 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FLST, FLSTC, FLSTF, FLSTN
Upper fork stem pinch bolt	25-30 ft-lbs	33.9-40.7 Nm	1.22 STEERING HEAD BEARINGS: FLSTSB, Adjustment: FLSTSB
Upper fork stem pinch bolt	25-30 ft-lbs	33.9-40.7 Nm	1.22 STEERING HEAD BEARINGS: FLSTSB, Adjustment: FLSTSB
Upper triple tree pinch bolt	25-30 ft-lbs	33.9-40.7 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FXST, FXSTB, FXSTC, FXCW/C
Upper triple tree pinch bolt	25-30 ft-lbs	33.9-40.7 Nm	1.21 STEERING HEAD BEARINGS: ALL BUT FLSTSB, Adjustment: FXST, FXSTB, FXSTC, FXCW/C



SERVICING A NEW MOTORCYCLE

⚠ WARNING

Perform the service and maintenance operations as indicated in the regular service interval table. Lack of regular maintenance at the recommended intervals can affect the safe operation of your motorcycle, which could result in death or serious injury. (00010a)

Service operations to be performed before customer delivery are specified in the applicable model year predelivery and set-up instructions.

The performance of new motorcycle initial service is required to keep warranty in force and to verify proper emissions systems operation. See [1.3 MAINTENANCE SCHEDULE](#).

SAFE OPERATING MAINTENANCE

NOTES

- Do not attempt to retighten engine head bolts. Retightening can cause engine damage.
- During the initial break-in period, use only Harley-Davidson 20W50 engine oil. Failure to use the recommended oil will result in improper break-in of the engine cylinders and piston rings.

A careful check of certain equipment is necessary after periods of storage, and frequently between regular service intervals, to determine if additional maintenance is required.

Check:

1. Tires for abrasions, cuts and correct pressure.
2. Secondary drive belt for proper tension and condition.
3. Brakes, steering and throttle for responsiveness.
4. Brake fluid level and condition. Hydraulic lines and fittings for leaks. Also, check brake pads and rotors for wear.
5. Cables for fraying, crimping and free operation.
6. Engine oil and transmission fluid levels.
7. Headlamp, auxiliary lamp, tail lamp, brake lamp, horn and turn signal operation.

SHOP PRACTICES

Repair Notes

General maintenance practices are given in this section.

NOTES

- Repair = Disassembly/Assembly.
- Replacement = Substitute a **new** part for existing component.

All special tools and torque values are noted at the point of use.

All required parts or materials can be found in the appropriate PARTS CATALOG.

Safety

Safety is always the most important consideration when performing any job. Be sure you have a complete understanding of the task to be performed. Use common sense. Use the proper tools. Protect yourself and bystanders with approved eye protection. Don't just do the job - do the job safely.

Removing Parts

Always consider the weight of a part when lifting. Use a hoist whenever necessary. Do not lift heavy parts by hand. A hoist and adjustable lifting beam or sling are needed to remove some parts. The lengths of chains or cables from the hoist to the part should be equal and parallel and should be positioned directly over the center of the part. Be sure that no obstructions will interfere with the lifting operation. Never leave a part suspended in mid-air.

⚠ WARNING

Be sure to check capacity rating and condition of hoists, slings, chains and cables before use. Exceeding capacity ratings or using lifting devices that are in poor condition can lead to an accident, which could result in death or serious injury. (00466c)

Always use blocking or proper stands to support the part that has been hoisted. If a part cannot be removed, verify that all bolts and attaching hardware have been removed. Check to see if any parts are in the way of the part being removed.

When removing hoses, wiring or tubes, always tag each part to verify proper installation.

Cleaning

If you intend to reuse parts, follow good shop practice and thoroughly clean the parts before assembly. Keep all dirt out of parts; the unit will perform better and last longer. Seals, filters and covers are used in this vehicle to keep out environmental dirt and dust. These items must be kept in good condition to guarantee satisfactory operation.

When you are instructed in a step to clean fastener threads or threaded holes, proceed as follows: Clean all LOCTITE material from fastener threads and threaded holes. Use a wire brush to clean fastener threads. Use a thread chaser or other suitable tool to clean threaded holes. Use PJ-1 cleaner or equivalent to remove all traces of oil and contaminants from threads. Blow out all threaded holes with low pressure compressed air.

Clean and inspect all parts as they are removed. Be sure all holes and passages are clean and open. After cleaning, cover all parts with clean lint-free cloth, paper or other material. Be sure the part is clean when it is installed.

Always clean around lines or covers before they are removed. Plug, tape or cap holes and openings to keep out dirt, dust and debris.

Always verify cleanliness of blind holes before assembly. Tightening a screw with dirt, water or oil in the hole can cause castings to crack or break.

Disassembly and Assembly

Always assemble or disassemble one part at a time. Do not work on two assemblies simultaneously. Be sure to make all necessary adjustments. Recheck your work when finished. Be sure that everything is done.

Operate the vehicle to perform any final check or adjustments. If all is correct, the vehicle is ready to go back to the customer.

Checking Torques on Fasteners

Attempt to turn the fastener using a torque wrench set to the minimum torque specification for that fastener. If the fastener does not rotate, the fastener torque has been maintained. If the fastener rotates, remove it to determine if it is a lock-patch type.

If it has a locking agent, clean all locking material from the threaded hole. Replace the fastener with a new one or clean the original fastener threads and apply the appropriate Loctite product (see appropriate procedure). Install and tighten the fastener to specification.

If the fastener is not lock-patch type, install and tighten to specification.

Magnetic Parts Trays

Magnetic parts trays are becoming common in the service facility because they are convenient and can keep parts from becoming lost during a repair procedure.

However, hardened steel parts can become magnetized when held in magnetic parts trays. Metal fragments that would ordinarily be washed away in the oil and trapped in the oil filter or magnetic drain plug during vehicle operation could be captured by magnetized parts in the engine, potentially causing accelerated engine wear and damage.

Parts that will be returned to service inside the vehicle's powertrain such as gears, thrust washers and especially bearings should never be kept in magnetic parts trays.

REPAIR AND REPLACEMENT PROCEDURES

Hardware and Threaded Parts

Install helical thread inserts when inside threads in castings are stripped, damaged or not capable of withstanding specified torque.

Replace bolts, nuts, studs, washers, spacers and small common hardware if missing or in any way damaged. Clean up or repair minor thread damage with a suitable tap or die.

Replace all damaged or missing lubrication fittings.

Use Teflon pipe sealant or LOCTITE 565 THREAD SEALANT on pipe fitting threads.

Threadlocking Agents

Always follow specific service manual procedures when working with fasteners containing preapplied threadlocking agents when fastener replacement is recommended. When re-using fasteners containing threadlocking agents, be sure to completely remove all existing threadlocking agent from fastener threads with a wire brush or wire wheel. Also, be sure to remove residual threadlocking agent from fastener hole using an appropriate thread chasing device and compressed air when

using new or existing fasteners. Always use the recommended threadlocking agent for your specific procedure.

Wiring, Hoses and Lines

Hoses, clamps, electrical wiring, electrical switches or fuel lines if they do not meet specifications.

Instruments and Gauges

Replace broken or defective instruments and gauges. Replace dials and glass that are so scratched or discolored that reading is difficult.

Bearings

Anti-friction bearings must be handled in a special way. To keep out dirt and abrasives, cover the bearings as soon as they are removed from the package.

Wash bearings in a non-flammable cleaning solution. Knock out packed lubricant inside by tapping the bearing against a wooden block. Wash bearings again. Cover bearings with clean material after setting them down to dry. Never use compressed air to dry bearings.

Coat bearings with clean oil. Wrap bearings in clean paper.

When bearings are installed against shoulders, be sure that the chamfered side of the bearing always faces the shoulder. Lubricate bearings and all metal contact surfaces before pressing into place. Only apply pressure on the part of the bearing that makes direct contact with the mating part. Install bearings with numbered side facing out.

Always use the proper tools and fixtures for removing and installing bearings.

Bearings do not usually need to be removed. Only remove bearings if necessary.

Bushings

Do not remove a bushing unless damaged, excessively worn or loose in its bore. Press out bushings that must be replaced.

When pressing or driving bushings, be sure to apply pressure in line with the bushing bore. Use a bearing/bushing driver or a bar with a smooth, flat end. Never use a hammer to drive bushings.

Inspect the bushing and the mated part for oil holes. Be sure all oil holes are properly aligned.

Gaskets

Always discard gaskets after removal. Replace with **new** gaskets. Never use the same gasket twice. Be sure that gasket holes match up with holes in the mating part. But be aware that sections of a gasket may be used to seal passages.

If a gasket must be made, be sure to cut holes that match up with the mating part. Serious damage can occur if any flange holes are blocked by the gasket. Use material that is the right type and thickness.

Lip Type Seals

Lip seals are used to seal oil or grease and are usually installed with the sealing lip facing the contained lubricant. Seal orientation, however, may vary under different applications.

Seals should not be removed unless necessary. Only remove seals if required to gain access to other parts or if seal damage or wear dictates replacement.

Leaking oil or grease usually means that a seal is damaged. Replace leaking seals to prevent overheated bearings.

Always discard seals after removal. Do not use the same seal twice.

O-Rings (Preformed Packings)

Always discard o-rings after removal. Replace with **new** o-rings. To prevent leaks, lubricate the o-rings before installation. Apply the same type of lubricant as that being sealed. Be sure that all gasket, o-ring and seal mating surfaces are thoroughly clean before installation.

Gears

Always check gears for damaged or worn teeth.

Remove burrs and rough spots with a honing stone or crocus cloth before installation.

Lubricate mating surfaces before pressing gears on shafts.

Shafts

If a shaft does not come out easily, check that all nuts, bolts or retaining rings have been removed. Check to see if other parts are in the way before using force.

Shafts fitted to tapered splines should be very tight. If shafts are not tight, disassemble and inspect tapered splines. Discard parts that are worn. Be sure tapered splines are clean, dry and free of burrs before putting them in place. Press mating parts together tightly.

Clean all rust from the machined surfaces of new parts.

Part Replacement

Always replace worn or damaged parts with **new** parts.

Exhaust System Leakage

In the event of an exhaust system leak at a muffler or header pipe connection location, disassemble and clean all mating surfaces. Replace any damaged components. If leak still exists, disassemble and repair the leak by applying a bead of Harley-Davidson High-Performance Sealant (Part No. 99650-02) (or an equivalent O2 Sensor/Catalyst-safe alternative). Reassemble components, wipe off any excess sealant and allow adequate curing time following sealant product instructions before operating vehicle.

CLEANING

Part Protection

Before cleaning, protect rubber parts (such as hoses, boots and electrical insulation) from cleaning solutions. Use a grease-proof barrier material. Remove the rubber part if it cannot be properly protected.

Cleaning Process

Any cleaning method may be used as long as it does not result in parts damage. Thorough cleaning is necessary for proper parts inspection. Strip rusted paint areas to bare metal before priming and repainting.

Rust or Corrosion Removal

Remove rust and corrosion with a wire brush, abrasive cloth, sand blasting, vapor blasting or rust remover. Use buffing crocus cloth on highly polished parts that are rusted.

Bearings

Remove shields and seals from bearings before cleaning. Clean bearings with permanent shields and seals in solution.

WARNING

Using compressed air to "spin dry" bearings can cause bearing to fly apart, which could result in death or serious injury. (00505b)

Clean open bearings by soaking them in a petroleum cleaning solution. Never use a solution that contains chlorine.

Let bearings stand and dry. Do not dry with compressed air. Do not spin bearings while they are drying.

TOOL SAFETY

Air Tools

- Always use approved eye protection equipment when performing any task using air-operated tools.
- On all power tools, use only recommended accessories with proper capacity ratings.
- Do not exceed air pressure ratings of any power tools.
- Bits should be placed against work surface before air hammers are operated.
- Disconnect the air supply line to an air hammer before attaching a bit.
- Never point an air tool at yourself or another person.
- Protect bystanders with approved eye protection.

Wrenches

- Never use an extension on a wrench handle.
- If possible, always pull on a wrench handle and adjust your stance to prevent a fall if something lets go.
- Never cock a wrench.
- Never use a hammer on any wrench other than a STRIKING FACE wrench.
- Discard any wrench with broken or battered points.
- Never use a pipe wrench to bend, raise or lift a pipe.

Pliers/Cutters/Pry bars

- Plastic- or vinyl-covered pliers handles are not intended to act as insulation. Do not use on live electrical circuits.
- Do not use pliers or cutters for cutting hardened wire unless they were designed for that purpose.
- Always cut at right angles.
- Do not use any pry bar as a chisel, punch or hammer.



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Hammers

- Never strike a hammer against a hardened object, such as another hammer.
- Always grasp a hammer handle firmly, close to the end.
- Strike the object with the full face of the hammer.
- Never work with a hammer which has a loose head.
- Discard hammer if face is chipped or mushroomed.
- Wear approved eye protection when using striking tools.
- Protect bystanders with approved eye protection.

Punches/Chisels

- Never use a punch or chisel with a chipped or mushroomed end; dress mushroomed chisels and punches with a file.
- Hold a chisel or a punch with a tool holder if possible.
- When using a chisel on a small piece, clamp the piece firmly in a vise and chip toward the stationary jaw.
- Wear approved eye protection when using these tools.
- Protect bystanders with approved eye protection.

Screwdrivers

- Do not use a screwdriver for prying, punching, chiseling, scoring or scraping.
- Use the right type of screwdriver for the job; match the tip to the fastener.
- Do not interchange POZIDRIV, PHILLIPS or REED AND PRINCE screwdrivers.
- Screwdriver handles are not intended to act as insulation. Do not use on live electrical circuits.
- Do not use a screwdriver with rounded edges because it will slip. Redress with a file.

Ratchets and Handles

- Periodically clean and lubricate ratchet mechanisms with a light grade oil. Do not replace parts individually; ratchets should be rebuilt with the entire contents of service kit.
- Never hammer or put a pipe extension on a ratchet or handle for added leverage.
- Always support the ratchet head when using socket extensions, but do not put your hand on the head or you may interfere with the action of its reversing mechanism.
- When breaking loose a fastener, apply a small amount of pressure as a test to be sure the ratchet's gear wheel is engaged with the pawl.

Sockets

- Never use hand sockets on power or impact wrenches.
- Select the right size socket for the job.
- Never cock any wrench or socket.
- Select only impact sockets for use with air or electric impact wrenches.
- Replace sockets showing cracks or wear.
- Keep sockets clean.
- Always use approved eye protection when using power or impact sockets.

Storage Units

- Do not open more than one loaded drawer at a time. Close each drawer before opening up another.
- Close lids and lock drawers and doors before moving storage units.
- Do not pull on a tool cabinet; push it in front of you.
- Set the brakes on the locking casters after the cabinet has been rolled to your workspace.

MAINTENANCE SCHEDULE

1.3

GENERAL

The table below lists the periodic maintenance requirements for Softail model motorcycles. If you are familiar with the procedures, just refer to the table for the recommended service interval. If necessary, see the quick reference table ([Table 1-2](#)) for the required specifications.

If more detailed information is needed, turn to the sections which follow for step-by-step instructions.

Also, throughout this manual, you will be instructed to use various lubricants, greases and sealants. Refer to [Table 1-3](#) for the correct part numbers of these items.

Table 1-1. Regular Service Intervals: 2009 Softail Models

ITEM SERVICED	PROCEDURE	1000 MI. 1600 KM	5000 MI. 8000 KM	10,000 MI. 16,000 KM	15,000 MI. 24,000 KM	20,000 MI. 32,000 KM	25,000 MI. 40,000 KM	NOTES
Engine oil and filter	Replace	X	X	X	X	X	X	
Oil lines and brake system	Inspect for leaks	X	X	X	X	X	X	1
Air cleaner	Inspect, service as required	X	X	X	X	X	X	
Tires	Check pressure, inspect tread	X	X	X	X	X	X	
Wheel spokes	Check tightness	X	X			X		1, 4
Primary chaincase lubricant	Replace	X		X		X		
Transmission lubricant	Replace	X				X		
Clutch	Check adjustment	X	X	X	X	X	X	1
Rear belt and sprockets	Inspect, adjust belt	X	X	X	X	X	X	1
Throttle, brake, and clutch controls	Check, adjust and lubricate	X	X	X	X	X	X	1
Jiffy stand	Inspect and lubricate	X		X		X		1
Fuel lines and fittings	Inspect for leaks	X	X	X	X	X	X	1
Fuel filter in fuel tank	Replace						X	1
Brake fluid	Check levels and condition	X	X	X	X	X	X	6
Brake pads and discs	Inspect for wear	X	X	X	X	X	X	
Spark plugs	Inspect	X	X	X	X	X	X	
	Replace					X		
Electrical equipment and switches	Check operation	X	X	X	X	X	X	
Engine idle speed	Check adjustment	X	X	X	X	X	X	1
Front fork oil	Replace	Replace at 50,000 miles (80,000 kilometers).						1
Steering head bearings (Softail models)	Adjust	X		X		X		1
	Lubricate			X		X		2
Steering head bearings (Springer models)	Adjust	Adjust and lubricate every 2500 miles (4000 kilometers).						1, 5
Windshield bushings	Inspect			X		X		1
Springer rocker bearings	Adjust	X		X		X		1, 7
Critical fasteners	Check tightness	X		X		X		1
Battery	Check battery and clean connections							3
Exhaust system	Inspect for leaks, cracks, and loose or missing fasteners or heat shields	X	X	X	X	X	X	3
Road test	Verify component and system functions	X	X	X	X	X	X	
NOTES:	1. Should be performed by an authorized Harley-Davidson dealer, unless you have the proper tools, service data and are mechanically qualified. 2. Disassemble, lubricate and inspect every 30,000 miles (48,000 kilometers). 3. Perform annually. 4. Not all vehicles are equipped with spoke wheels. Consult appropriate topic in service manual. 5. Disassemble, lubricate and inspect every 20,000 miles (32,000 kilometers). 6. Change D.O.T. 4 fluid and flush brake system every two years. 7. Adjust at 500 miles (800 kilometers).							

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