

2014 Harley-Davidson V-Rod Models Service Manual

FASTENER	TORQUE VALUE		NOTES
ABS module fasteners	4-6 Nm	35-53 in-lbs	C.2 ABS MODULE, ABS Module Service
ABS module fasteners	4-6 Nm	35-53 in-lbs	C.4 ABS BRAKE LINES, Front Master Cylinder to ABS Module
Air bleed plug	9-11 Nm	80-97 in-lbs	5.4 ENGINE COOLANT, Drain and Fill Cooling System
Air bleed plug	9-11 Nm	80-97 in-lbs	5.10 RADIATOR AND OIL COOLER, Installation
Air cleaner velocity stack screw	6 Nm	53 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Alternator cover fastener	9.7 Nm	86 in-lbs	7.19 ALTERNATOR, Installation
Alternator cover harness clip fastener	8.2-10.7 Nm	72-95 in-lbs	7.19 ALTERNATOR, Assembly
Alternator rotor bolt; first torque then loosen	83 Nm	61 ft-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Primary Cam Drive Installation
Alternator rotor bolt; first torque then loosen	83 Nm	61 ft-lbs	7.19 ALTERNATOR, Installation
Alternator rotor bolt; second torque	180 Nm	132 ft-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Primary Cam Drive Installation
Alternator rotor bolt; second torque	180 Nm	132 ft-lbs	7.19 ALTERNATOR, Installation
Auxiliary volume screws	10-13 Nm	13-17 ft-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Axle nut, front	81-88 Nm	60-65 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Axle nut, rear	190-203 Nm	140-150 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Banjo bolt	23-31 Nm	17-23 ft-lbs	2.14 CLUTCH FLUID LINE, Installation
Banjo bolt	23-31 Nm	17-23 ft-lbs	2.15 SECONDARY CLUTCH ACTUATOR, Installation
Banjo bolt to ABS module	17-20 Nm	12.5-14.7 ft-lbs	C.4 ABS BRAKE LINES, Front Master Cylinder to ABS Module
Banjo bolt to ABS module	17-20 Nm	12.5-14.7 ft-lbs	C.4 ABS BRAKE LINES, ABS Module to Front Brake Calipers
Banjo bolt to ABS module	17-20 Nm	12.5-14.7 ft-lbs	C.4 ABS BRAKE LINES, Rear Master Cylinder to ABS Module
Banjo bolt to ABS module	17-20 Nm	12.5-14.7 ft-lbs	C.4 ABS BRAKE LINES, ABS Module to Rear Brake Caliper
Banjo bolt to calipers	23-29 Nm	17.0-21.4 ft-lbs	C.4 ABS BRAKE LINES, ABS Module to Rear Brake Caliper
Banjo bolt to master cylinder	17-20 Nm	12.5-14.7 ft-lbs	C.4 ABS BRAKE LINES, Front Master Cylinder to ABS Module
Banjo bolt to master cylinder	23-29 Nm	17.0-21.4 ft-lbs	C.4 ABS BRAKE LINES, Rear Master Cylinder to ABS Module
Battery terminal	6.8-7.9 Nm	60-70 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Battery terminal	6.8-7.9 Nm	60-70 in-lbs	1.19 BATTERY MAINTENANCE, Installation/Connection
Battery terminal bolt	6.8-7.9 Nm	60-70 in-lbs	7.24 OIL PRESSURE SWITCH, Installation
Battery terminal bolts	6.8-7.9 Nm	60-70 in-lbs	2.4 LOWER FRAME RAILS, Installation
Battery terminal bolts	6.8-7.9 Nm	60-70 in-lbs	2.5 FRONT ENGINE MOUNT, Replacement
Battery terminal bolts	6.8-7.9 Nm	60-70 in-lbs	2.6 FRONT ENGINE MOUNT ASSEMBLY, Installation
Battery terminal bolts	6.8-7.9 Nm	60-70 in-lbs	2.7 REAR ENGINE MOUNTS, Installation
Battery terminal bolts	6.8-7.9 Nm	60-70 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Battery terminal bolts	6.8-7.9 Nm	60-70 in-lbs	2.32 FRONT FORK, Installation
Belt drive sprocket cover fasteners	6-10 Nm	53-88 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Belt drive sprocket cover fasteners	6-10 Nm	53-88 in-lbs	6.9 DRIVE BELT, Replacement

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Belt guard fasteners	6-10 Nm	53-88 in-lbs	2.35 BELT GUARD AND DEBRIS DEFLECTOR, Installation
Belt guard grommet bolt	6-10 Nm	53-88 in-lbs	2.35 BELT GUARD AND DEBRIS DEFLECTOR, Installation
Bleeder screw, secondary clutch actuator	9-11 Nm	80-97 in-lbs	2.15 SECONDARY CLUTCH ACTUATOR, Installation
Bleeder screw, secondary clutch actuator	9-11 Nm	80-97 in-lbs	2.16 BLEEDING CLUTCH FLUID LINE, Procedure
Bleeder screws	23.0-26.0 Nm	17.0-19.2 ft-lbs	C.4 ABS BRAKE LINES, ABS Module to Front Brake Calipers
Bleed Screw	9-11 Nm	80-97 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Brake caliper bleeder valve, front	9.0-11.3 Nm	80-100 in-lbs	2.21 BLEEDING BRAKES, Procedure
Brake caliper bleeder valve, rear	3.5-3.7 Nm	31-33 in-lbs	2.21 BLEEDING BRAKES, Procedure
Brake disc bolts, front	22-33 Nm	16-24 ft-lbs	2.25 FRONT WHEEL, Assembly
Brake disc bolts, rear	41-53 Nm	30-38 ft-lbs	2.26 REAR WHEEL, Assembly
Brake line banjo bolt, front caliper	23-26 Nm	17-19 ft-lbs	2.18 FRONT BRAKE CALIPER, Installation
Brake line clamp fastener (to frame)	6-10 Nm	53.1-88.4 in-lbs	C.4 ABS BRAKE LINES, ABS Module to Rear Brake Caliper
Brake line clamp fasteners (to rear fork)	5-7 Nm	44.2-61.9 in-lbs	C.4 ABS BRAKE LINES, ABS Module to Rear Brake Caliper
Brake line clamp fasteners (to rear fork)	5-7 Nm	44.2-61.9 in-lbs	C.4 ABS BRAKE LINES, ABS Module to Rear Brake Caliper
Brake line screw	6-10 Nm	53.1-88.4 in-lbs	C.4 ABS BRAKE LINES, ABS Module to Front Brake Calipers
Brake master cylinder, front, reservoir cover screws	1.1-1.4 Nm	10-12 in-lbs	2.21 BLEEDING BRAKES, Procedure
Bright hose clamp	3-4 Nm	27-35 in-lbs	5.6 WATER PUMP, Installation
Caliper pad pin	8.5-11.5 Nm	75-102 in-lbs	1.14 BRAKE PADS AND DISCS, Brake Pad Replacement
Cam chain tensioner, secondary	100 Nm	74 ft-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Installation of Cams, Timing Chains and Camshaft Timing
Cam chain tensioner, secondary	100 Nm	74 ft-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Installation of Cams, Timing Chains and Camshaft Timing
Cam cover fasteners	11 Nm	97 in-lbs	1.18 VALVE LASH, Lash Adjustment
Cam cover fasteners	9.7 Nm	86 in-lbs	1.18 VALVE LASH, Lash Adjustment
Cam cover fasteners	11 Nm	97 in-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Installation of Cams, Timing Chains and Camshaft Timing/Special method: Install in sequence: cable straps first, spark plug hole gasket second
Cam journal caps	9.7 Nm	86 in-lbs	1.18 VALVE LASH, Lash Adjustment
Cam journal caps	9.7 Nm	86 in-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Installation of Cams, Timing Chains and Camshaft Timing
Cam journal caps	9.7 Nm	86 in-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Installation of Cams, Timing Chains and Camshaft Timing

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FASTENER	TORQUE VALUE		NOTES
Cam journal caps	9.7 Nm	86 in-lbs	3.10 CYLINDER HEAD, Head Assembly
Camshaft sprocket fasteners	23 Nm	17 ft-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAMSHAFT TIMING, Installation of Cams, Timing Chains and Camshaft Timing
Center mounting bolt	34-41 Nm	25-30 ft-lbs	2.6 FRONT ENGINE MOUNT ASSEMBLY, Installation
Clamp and bright clamp	3-4 Nm	27-35 in-lbs	5.7 COOLANT PIPES AND HOSES, Installation
Clutch fluid line flare nut	9-13 Nm	80-115 in-lbs	2.14 CLUTCH FLUID LINE, Installation
Clutch fluid line flare nut	9-13 Nm	80-115 in-lbs	2.15 SECONDARY CLUTCH ACTUATOR, Installation
Clutch hub nut	220 Nm	162 ft-lbs	6.3 CLUTCH, Installation
Clutch inspection cover	6-10 Nm	53-88 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Clutch master cylinder/reservoir, banjo bolt	17-20 Nm	13-14 ft-lbs	2.12 CLUTCH MASTER CYLINDER AND RESERVOIR, Installation
Clutch master cylinder/reservoir, reservoir cover screws	0.7-0.9 Nm	6-8 in-lbs	2.12 CLUTCH MASTER CYLINDER AND RESERVOIR, Installation
Clutch reservoir cover screws	0.7-0.9 Nm	6-8 in-lbs	2.15 SECONDARY CLUTCH ACTUATOR, Installation
Clutch side crankcase cover fasteners	9.7 Nm	86 in-lbs	6.3 CLUTCH, Installation
Coil fasteners	9.7 Nm	86 in-lbs	1.15 SPARK PLUGS AND COIL, Installation
Compensator bowl screws (final torque)	102-115 Nm	75-85 ft-lbs	2.26 REAR WHEEL, Assembly
Compensator bowl screws (initial torque)	75-88 Nm	55-65 ft-lbs	2.26 REAR WHEEL, Assembly
Connecting rod caps; specification plus 90 degrees	27 Nm	20 ft-lbs	3.12 ENGINE BOTTOM END SERVICE, Crankshaft, Piston and Cylinder Liner Removal/Installation/Tighten to specification plus 90 degrees
Connecting rod caps: specification plus 90 degrees	27 Nm	20 ft-lbs	3.12 ENGINE BOTTOM END SERVICE, Crankshaft, Piston and Cylinder Liner Removal/Installation/Tighten to specification plus 90 degrees
Coolant air bleed plug	9-11 Nm	80-97 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Cooling fan fasteners	5-7 Nm	44-62 in-lbs	7.27 COOLING FANS, Installation
Cooling system, cross member fasteners	20-26 Nm	15-19 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
Cooling system, hose worm drive clamps	3-4 Nm	27-35 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Cooling system, P-clamp	6-10 Nm	53-88 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Cooling system, pipe clamp	6.5 Nm	57 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Cooling system, pipe connecting clamp	6-10 Nm	53-88 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Cooling system, top mounting flange nuts	19-27 Nm	15-20 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
Counterbalancer gear fastener; specification plus 90 degrees	50 Nm	37 ft-lbs	6.4 TRANSMISSION, Assembly
Counterbalancer gear fastener: specification plus 90 degrees	50 Nm	37 ft-lbs	6.5 COUNTERBALANCER BEARING REPLACEMENT, Installation
Crankcase/transmission case fasteners	25 Nm	18.4 ft-lbs	6.4 TRANSMISSION, Assembly
Crank position sensor fastener	8.2-10.7 Nm	73-95 in-lbs	7.17 CRANK POSITION SENSOR (CKP), Installation
cross member fasteners	20-26 Nm	14.7-19.2 ft-lbs	7.27 COOLING FANS, Installation
Cross member fasteners	20-26 Nm	15-19 ft-lbs	5.10 RADIATOR AND OIL COOLER, Installation

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Cross member mounting bolts	20-26 Nm	15-19 ft-lbs	2.4 LOWER FRAME RAILS, Installation
Crossover TORCA clamp	13-15 Nm	115-133 in-lbs	4.15 EXHAUST SYSTEM: VRSCF, Installation
Cylinder head bolts; first torque then loosen one turn	35 Nm	26 ft-lbs	3.10 CYLINDER HEAD, Installation/Loosen one full turn then final tighten.
Cylinder head bolts; second torque	20 Nm	15 ft-lbs	3.10 CYLINDER HEAD, Installation/Tighten to specification plus an additional 90 degrees
Cylinder head exhaust flange nuts, front	8-12 Nm	71-106 in-lbs	4.15 EXHAUST SYSTEM: VRSCF, Installation
Cylinder head exhaust flange nuts, rear	8-12 Nm	71-106 in-lbs	4.15 EXHAUST SYSTEM: VRSCF, Installation
Debris deflector fastener	6-10 Nm	53-88 in-lbs	2.26 REAR WHEEL, Installation
Debris deflector fastener	6-10 Nm	53-88 in-lbs	2.35 BELT GUARD AND DEBRIS DEFLECTOR, Installation
Debris deflector fastener	6-10 Nm	53-88 in-lbs	6.9 DRIVE BELT, Replacement
Derby cover fastener	8.2-10.7 Nm	73-95 in-lbs	7.19 ALTERNATOR, Installation
Drain plug, engine oil	35 Nm	25.8 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Drain plug, radiator	2.3-2.8 Nm	21-24 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Drive sprocket cover fasteners	6-10 Nm	53-88 in-lbs	4.8 OXYGEN SENSOR, Installation
Drive sprocket cover screws	6-10 Nm	53-88 in-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Drive sprocket flange nut	160 Nm	118 ft-lbs	6.7 OUTPUT SHAFT, Disassembly: 2nd Gear End
Drive sprocket flange nut	160 Nm	118 ft-lbs	6.10 DRIVE SPROCKET FLANGE, Replacement
Drive sprocket flange seal retainer fasteners	23 Nm	17 ft-lbs	6.4 TRANSMISSION, Assembly
Drive sprocket flange seal retainer fasteners	23 Nm	17 ft-lbs	6.10 DRIVE SPROCKET FLANGE, Replacement
Drive sprocket locking bolts	88-102 Nm	65-75 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
ECT sensor	23 Nm	17 ft-lbs	5.8 ENGINE COOLANT TEMPERATURE SENSOR (ECT), Installation
Engine crankcase end of stabilizer link	34-41 Nm	25-30 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
Engine mount bracket bolts	34-41 Nm	25-30 ft-lbs	2.6 FRONT ENGINE MOUNT ASSEMBLY, Installation
Engine mount bracket bolts	34-41 Nm	25-30 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
Engine mount double threaded studs	34-41 Nm	25-30 ft-lbs	2.6 FRONT ENGINE MOUNT ASSEMBLY, Installation
Engine mount double-threaded studs	34-41 Nm	25-30 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
Engine mount to bracket	34-41 Nm	25-30 ft-lbs	2.6 FRONT ENGINE MOUNT ASSEMBLY, Disassembly And Assembly
Exhaust bracket stud plate fasteners	19-27 Nm	14-20 ft-lbs	4.15 EXHAUST SYSTEM: VRSCF, Installation
Exhaust flange nuts	8-12 Nm	71-106 in-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Exhaust shield clamps	2-5 Nm	20-40 in-lbs	4.15 EXHAUST SYSTEM: VRSCF, Installation
Exhaust shield screws	12-14 Nm	106-124 in-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Exhaust shield screws	2-5 Nm	18-44 in-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Exhaust support assembly screws	19-27 Nm	14-20 ft-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Fender, inner fasteners	95-110 Nm	75-81 ft-lbs	2.39 REAR FENDER, Installation
Fender light assembly: VRSCDX (rear)	1.1-2.3 Nm.	9.7-20.3 in-lbs	7.15 TURN SIGNALS AND RUNNING LIGHTS: VRSCDX, Lamp Replacement
Fender mounting fasteners	20-26 Nm	15-19 ft-lbs	2.39 REAR FENDER, Installation

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FASTENER	TORQUE VALUE		NOTES
Fender to fork brace, front	4.1-6.8 Nm	36-60 in-lbs	2.31 FRONT FENDER, All Models/Tighten in crosswise pattern.
Footrest bracket/stud plate nuts	19-27 Nm	14-20 ft-lbs	2.10 PASSENGER FOOTRESTS, Passenger Footrests: VRSCF
Footrest bracket socket head capscrews	55-70 Nm	40-52 ft-lbs	2.10 PASSENGER FOOTRESTS, Passenger Footrests: All except VRSCF
Footrest clevis fastener	61-75 Nm	45-55 ft-lbs	2.9 RIDER FOOTRESTS AND FOOT CONTROLS, Rider Footrests
Footrest clevis fastener	61-75 Nm	45-55 ft-lbs	2.9 RIDER FOOTRESTS AND FOOT CONTROLS, Rider Footrests
Fork and stem pinch bolts	41-48 Nm	30-35 ft-lbs	1.17 STEERING HEAD BEARINGS, Adjustment (Fall-Away)
Fork brace to forks, front	20-26 Nm	15-19 ft-lbs	2.31 FRONT FENDER, All Models
Fork bracket pinch bolt, lower	41-48 Nm	30-35 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Fork bracket pinch bolt, upper	41-48 Nm	30-35 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Fork bracket pinch bolts	41-47 Nm	30-35 ft-lbs	2.32 FRONT FORK, Installation
Fork bracket pinch bolts	41-47 Nm	30-35 ft-lbs	2.32 FRONT FORK, Installation
Fork bracket pinch bolts	41-47 Nm	30-35 ft-lbs	2.32 FRONT FORK, Installation
Fork bracket pinch bolts	41-47 Nm	30-35 ft-lbs	2.32 FRONT FORK, Installation
Fork bracket pinch bolts	41-47 Nm	30-35 ft-lbs	2.32 FRONT FORK, Installation
Fork bracket pinch bolts	41-47 Nm	30-35 ft-lbs	2.32 FRONT FORK, Installation
Fork cap	29-39 Nm	21.3-28.8 ft-lbs	2.32 FRONT FORK, Assembly/Fork cap into fork
Fork cap	29-39 Nm	21.3-28.8 ft-lbs	2.32 FRONT FORK, Assembly/Fork cap into fork
Fork cartridge fastener	15-25 Nm	132-221 in-lbs	2.32 FRONT FORK, Assembly
Fork stem bracket pinch bolts	41-48 Nm	30-35 ft-lbs	1.17 STEERING HEAD BEARINGS, Adjustment (Fall-Away)
Front and rear oil cooler fasteners	10-12 Nm	89-106 in-lbs	5.11 OIL COOLER, Installation
Front axle pinch bolt	55-65 Nm	41-48 ft-lbs	2.25 FRONT WHEEL, Installation
Front brake caliper bottom mounting bolt	43-52 Nm	32-38 ft-lbs	2.18 FRONT BRAKE CALIPER, Installation
Front brake caliper top mounting bolt	43-52 Nm	32-38 ft-lbs	2.18 FRONT BRAKE CALIPER, Installation
Front brake hose bracket bolt	6-10 Nm	53-89 in-lbs	2.33 STEERING HEAD, Installation
Front brake master cylinder banjo bolt	17-20 Nm	13-15 ft-lbs	2.17 FRONT BRAKE MASTER CYLINDER AND RESERVOIR, Installation
Front brake master cylinder cover screws	1.1-1.4 Nm	10-12 in-lbs	2.17 FRONT BRAKE MASTER CYLINDER AND RESERVOIR, Installation
Front caliper pin	8.5-11.5 Nm	75-102 in-lbs	1.14 BRAKE PADS AND DISCS, Brake Pad Replacement
Front cylinder secondary cam chain tensioner	100 Nm	74 ft-lbs	1.22 SECONDARY CAM CHAIN, Adjustment
Front engine coolant drain plug	9.7 Nm	86 in-lbs	5.4 ENGINE COOLANT, Drain and Fill Cooling System
Front engine drain plug	9.7 Nm	86 in-lbs	2.8 ENGINE REPLACEMENT, Removal
Front engine mount bolts	34-41 Nm	25-30 ft-lbs	2.5 FRONT ENGINE MOUNT, Replacement
Front engine mount fastener	38 Nm	28 ft-lbs	1.18 VALVE LASH, Lash Adjustment
Front wheel axle nut	81-88 Nm	60-65 ft-lbs	2.25 FRONT WHEEL, Installation

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Fuel injector screws	2.0-2.8 Nm	18-25 in-lbs	4.9 FUEL INJECTORS, Assembly
Fuel injector screws	2.0-2.8 Nm	18-25 in-lbs	4.9 FUEL INJECTORS, Assembly
Fuel injector screws	2.0-2.8 Nm	18-25 in-lbs	4.9 FUEL INJECTORS, Assembly
Fuel rail bolts	9.7 Nm	86 in-lbs	4.5 THROTTLE BODY AND FUEL RAIL, Installation
Fuel tank mounting fasteners	40-48 Nm	30-35 ft-lbs	4.10 FUEL TANK, Installation
Grabstrap	20-26 Nm	14-19 ft-lbs	2.38 SEAT, Installation
Ground cable terminal ring nut bolt	6-10 Nm	53-88 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Handlebar (VRSCDX), cast riser fasteners	41-47 Nm	31-35 ft-lbs	2.22 HANDLEBARS: VRSCDX, Installation
Handlebar (VRSCDX) clamp, front fasteners	16-20 Nm	12-15 ft-lbs	2.22 HANDLEBARS: VRSCDX, Installation/First, tighten front fasteners until cast-in spacers of upper clamp contact handlebar lower clamp. Second, tighten rear fasteners to torque. Third, tighten front fasteners to torque.
Handlebar (VRSCDX) clamp, rear fasteners	16-20 Nm	12-15 ft-lbs	2.22 HANDLEBARS: VRSCDX, Installation/First, tighten front fasteners until cast-in spacers of upper clamp contact handlebar lower clamp. Second, tighten rear fasteners to torque. Third, tighten front fasteners to torque.
Handlebar clamp and master cylinder housing screws	8-9 Nm	71-80 in-lbs	2.17 FRONT BRAKE MASTER CYLINDER AND RESERVOIR, Installation
Handlebar clamp screw	6.8-9.0 Nm	60-80 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Handlebar clamp screw	6.8-9.0 Nm	60-80 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Handlebar clamp screw	6.8-9.0 Nm	60-80 in-lbs	7.29 RIGHT HANDLEBAR SWITCH, Installation/T25 TORX
Handlebar clamp screw	6.8-9.0 Nm	60-80 in-lbs	7.30 LEFT HANDLEBAR SWITCH, Installation/T27 TORX
Handlebar clamp screws	8-9 Nm	71-80 in-lbs	2.12 CLUTCH MASTER CYLINDER AND RESERVOIR, Installation
Handlebar housing screws	4.0-5.1 Nm	35-45 in-lbs	1.11 THROTTLE CABLES, Lubrication
Handlebars (VRSCF) bolts	41-47 Nm	31-35 ft-lbs	2.23 HANDLEBARS: VRSCF, Installation
Handlebar switch housing screw	4-5 Nm	35-45 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Handlebar switch housing screw	4-5 Nm	35-45 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Handlebar switch housing screws	4.0-5.1 Nm	35-45 in-lbs	7.29 RIGHT HANDLEBAR SWITCH, Installation/T25 TORX
Handlebar switch housing screws	4.0-5.1 Nm	35-45 in-lbs	7.30 LEFT HANDLEBAR SWITCH, Installation/T25 TORX
Head bolts, 6 mm	9.7 Nm	86 in-lbs	3.10 CYLINDER HEAD, Installation
Headlamp alignment fastener	4.5-7.5 Nm	40-66 in-lbs	1.23 HEADLAMP ALIGNMENT, Headlamp Adjustment
Headlamp bracket fastener	11-18 Nm	8-13 ft-lbs	7.21 INSTRUMENT CLUSTER: VRSCF, Installation
Headlamp bracket fasteners, VRSCF	11-18 Nm	108-156 in-lbs	2.23 HANDLEBARS: VRSCF, Installation
Hex-nut	6-10 Nm	53-88 in-lbs	7.9 STARTER, Installation
Hex-nuts	6-10 Nm	53-88 in-lbs	7.10 STARTER SOLENOID, Installation
Horn assembly acorn nut	9-15 Nm	80-132 in-lbs	7.26 HORN, Replacement
Horn flange nut	6-8 Nm	53-70 in-lbs	7.26 HORN, Replacement

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Hose clamps	3-4 Nm	27-35 in-lbs	5.10 RADIATOR AND OIL COOLER, Installation
Hose cover	3-4 Nm	27-35 in-lbs	5.6 WATER PUMP, Installation
IAC screws	2-4 Nm	25-35 in-lbs	4.6 IDLE AIR CONTROL (IAC), Installation
Ignition/light switch fasteners	4-7 Nm	35-62 in-lbs	7.11 IGNITION/HEADLAMP KEY SWITCH, Replacement
Inner fork nut	93-113 Nm	69-83 ft-lbs	2.32 FRONT FORK, Assembly/Hand tighten. Then tighten to torque.
Input bearing retainer fasteners	23 Nm	17 ft-lbs	6.4 TRANSMISSION, Assembly
Instrument cluster housing fasteners	4-7 Nm	35.4-62.0 in-lbs	2.23 HANDLEBARS: VRSCF, Installation
Instrument cluster housing screws	4.1-6.8 Nm	36.3-60.2 in-lbs	7.21 INSTRUMENT CLUSTER: VRSCF, Installation
Instrument cluster screws	4.1-6.8 Nm	36.3-60.2 in-lbs	7.21 INSTRUMENT CLUSTER: VRSCF, Installation
Instrument cluster to housing fasteners	1.3-1.9 Nm	12-16 in-lbs	7.20 INSTRUMENT CLUSTER: VRSCDX, Installation
Instrument housing hinge fastener	2.2-2.8 Nm	20-24 in-lbs	7.20 INSTRUMENT CLUSTER: VRSCDX, Installation
Intake hose clamps	1.25 Nm	11 in-lbs	4.5 THROTTLE BODY AND FUEL RAIL, Installation
Jiffy stand anchor	7-9 Nm	62-79 in-lbs	2.41 JIFFY STAND, Installation
License plate bracket fasteners (VRSCF) (Non-DOM)	8-12 Nm	70.7-106.1 in-lbs	2.40 LICENSE PLATE BRACKET: VRSCF, Installation: Non-US
License plate bracket fasteners (VRSCF-DOM)	9-11 Nm	80-97 in-lbs	2.40 LICENSE PLATE BRACKET: VRSCF, Installation: US Only
License plate lamp fasteners (VRSCDX)	1.1-2.3 Nm	9.7-20.3 in-lbs	7.15 TURN SIGNALS AND RUNNING LIGHTS: VRSCDX, Lamp Replacement
Locking bolts	88-102 Nm	65-75 ft-lbs	6.9 DRIVE BELT, Replacement
Locking bolts	88-102 Nm	65-75 ft-lbs	6.10 DRIVE SPROCKET FLANGE, Replacement
Lower frame rail bolts	61-75 Nm	45-55 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
Lower frame rail bolts (final torque)	61-75 Nm	45-55 ft-lbs	2.4 LOWER FRAME RAILS, Installation
Lower frame rail bolts (initial torque)	61-75 Nm	45-55 ft-lbs	2.4 LOWER FRAME RAILS, Installation
Lower frame rail fasteners (final)	61-75 Nm	45-55 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Lower frame rail fasteners (initial)	61-75 Nm	45-55 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Lower muffler clamp	61-69 Nm	45-51 ft-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Lower muffler screws	19-27 Nm	14-20 ft-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Main bearing bolts; second torque plus 90 degrees	15 Nm	131 in-lbs	6.4 TRANSMISSION, Assembly/Tighten to specification plus an additional 90 degrees
MAP sensor bracket bolt	6.0-10.0 Nm	53-88 in-lbs	4.7 MANIFOLD ABSOLUTE PRESSURE SENSOR (MAP), Installation
Master cylinder banjo bolt torque, front	17-20 Nm	12.5-14.7 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Master cylinder banjo bolt torque, rear	23-29 Nm	17.0-21.4 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Master cylinder reservoir cover	1.1-1.4 Nm	10-12 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Master cylinder reservoir cover	0.7-0.9 Nm	6-8 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Master cylinder reservoir cover	1.1-1.4 Nm	10-12 in-lbs	1.5 MAINTENANCE SCHEDULE, General
Mirror adjustment fastener	11-13 Nm	97-115 in-lbs	7.16 TURN SIGNALS: VRSCF, Turn Signal Replacement
Muffler endcap fasteners	1.7-2.3 Nm	15-20 in-lbs	4.15 EXHAUST SYSTEM: VRSCF, Installation

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FASTENER	TORQUE VALUE		NOTES
Muffler inlet endcap screws	0.6-1.2 Nm	5.3-10.6 in-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Muffler outlet endcap screws	1.7-2.3 Nm	15.0-20.3 in-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Muffler TORCA clamps	52-58 Nm	38-43 ft-lbs	4.15 EXHAUST SYSTEM: VRSCF, Installation
Neutral switch	12.8-16.5 Nm	113-146 in-lbs	7.23 NEUTRAL SWITCH, Installation
Oil drain plug	35 Nm	25.8 ft-lbs	1.6 ENGINE OIL AND FILTER, Changing Oil and Filter
Oil drain plug	35 Nm	25 ft-lbs	2.8 ENGINE REPLACEMENT, Removal
Oil filter mount fasteners	9.7 Nm	86 in-lbs	3.14 OIL FILTER MOUNT, Removal/Installation
Oil line fittings	25.5-33.0 Nm	18.8-24.3 ft-lbs	5.9 OIL LINE FITTINGS, Installation
Oil line manifold fasteners	8-10 Nm	71-88 in-lbs	5.11 OIL COOLER, Installation
Oil pan fasteners	9.7 Nm	86 in-lbs	6.4 TRANSMISSION, Assembly
Oil pickup fasteners	9.7 Nm	86 in-lbs	6.4 TRANSMISSION, Assembly
Oil pressure switch	10.8-13.6 Nm	96-120 in-lbs	7.24 OIL PRESSURE SWITCH, Installation
Oil pump fasteners	9.7 Nm	86 in-lbs	3.13 OIL PUMP, Removal/Installation
Oxygen sensor	16.5-19.5 Nm	12-14 ft-lbs	4.8 OXYGEN SENSOR, Installation
Oxygen sensor bracket nut	8-10 Nm	71-88 in-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Oxygen sensor heat shield bracket	8-12 Nm	71-106 in-lbs	4.8 OXYGEN SENSOR, Installation
Passenger pillion fasteners	6-10 Nm	53-88 in-lbs	2.39 REAR FENDER, Installation
P-clamp	6-10 Nm	53-88 in-lbs	5.7 COOLANT PIPES AND HOSES, Installation
P-clamp	6-10 Nm	53-88 in-lbs	5.10 RADIATOR AND OIL COOLER, Installation
Pillion mounting nut	6-10 Nm	53-88 in-lbs	2.38 SEAT, Installation
Pipe clamp	6.5 Nm	57 in-lbs	5.7 COOLANT PIPES AND HOSES, Installation
Pipe clamp	6.5 Nm	57 in-lbs	5.10 RADIATOR AND OIL COOLER, Installation
Pipe clamp and P-clamp fasteners	6-10 Nm	53-88 in-lbs	5.5 THERMOSTAT, Installation
Pivot shaft nut	61-75 Nm	45-55 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Pivot shaft nut	61-75 Nm	45-55 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
Pivot shaft nut	61-75 Nm	45-55 ft-lbs	2.37 REAR FORK, Installation
Primary chain fixed tensioner fastener	9.7 Nm	86 in-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Primary Cam Drive Installation
Primary chain hydraulic tensioner fasteners	9.7 Nm	86 in-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Primary Cam Drive Installation
Primary gear fasteners: specification plus 60 degrees	15 Nm	132 in-lbs	3.12 ENGINE BOTTOM END SERVICE, Crankshaft, Piston and Cylinder Liner Removal/Installation/Tighten in a crosswise pattern plus 60 degrees.
Radiator cover fasteners	4.1-6.8 Nm	36-60 in-lbs	7.19 ALTERNATOR, Installation
Radiator cover fasteners	4.1-6.8 Nm	36-60 in-lbs	7.27 COOLING FANS, Installation
Radiator front cover fasteners	4.1-6.8 Nm	36-60 in-lbs	7.18 VOLTAGE REGULATOR, Installation
Radiator hose fasteners	9.7 Nm	86 in-lbs	1.18 VALVE LASH, Lash Adjustment
Radiator mounting nuts	19-27 Nm	14-20 ft-lbs	5.10 RADIATOR AND OIL COOLER, Installation
Radiator oil line bracket fastener	8-10 Nm	71-88 in-lbs	5.11 OIL COOLER, Installation
Radiator side cover fastener	3-4 Nm	27-35 in-lbs	1.20 RADIATOR SIDE COVERS, Installation
Radiator trim cover fastener	3-4 Nm	26-35 in-lbs	7.27 COOLING FANS, Installation
Radiator trim cover fastener	3-4 Nm	26-35 in-lbs	7.27 COOLING FANS, Installation

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FASTENER	TORQUE VALUE		NOTES
Rear axle nut	190-203 Nm	140-150 ft-lbs	1.10 DRIVE BELT AND SPROCKETS, Checking and Adjusting Drive Belt Deflection
Rear axle nut	190-203 Nm	140-150 ft-lbs	2.8 ENGINE REPLACEMENT, Installation
Rear axle nut	190-203 Nm	140-150 ft-lbs	2.26 REAR WHEEL, Installation
Rear axle nut	190-203 Nm	140-150 ft-lbs	6.9 DRIVE BELT, Replacement
Rear brake caliper banjo bolt	23-26 Nm	17-19 ft-lbs	2.20 REAR BRAKE CALIPER, Installation
Rear brake caliper fastener	58-66 Nm	43-48 ft-lbs	2.20 REAR BRAKE CALIPER, Removal
Rear brake master cylinder banjo bolt	23-26 Nm	17-19 ft-lbs	2.19 REAR BRAKE MASTER CYLINDER AND RESERVOIR, Installation
Rear brake master cylinder jamnut	41-54 Nm	30-40 ft-lbs	2.19 REAR BRAKE MASTER CYLINDER AND RESERVOIR, Installation
Rear brake reservoir cover screws	0.7-0.9 Nm	6-8 in-lbs	2.19 REAR BRAKE MASTER CYLINDER AND RESERVOIR, Installation
Rear engine mount fasteners	34-41 Nm	25-30 ft-lbs	2.7 REAR ENGINE MOUNTS, Installation
Rear exhaust pipe to auxiliary volume clamp	13-17 Nm	115-150 in-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Reservoir banjo bolt	23-31 Nm	17-23 ft-lbs	2.16 BLEEDING CLUTCH FLUID LINE, Procedure
Reservoir cap screws (front)	1.1-1.4 Nm	10-12 in-lbs	1.14 BRAKE PADS AND DISCS, Brake Pad Replacement
Reservoir cap screws (rear)	0.7-0.9 Nm	6-8 in-lbs	1.14 BRAKE PADS AND DISCS, Brake Pad Replacement
Reservoir cover screws	0.7-0.9 Nm	6-8 in-lbs	2.16 BLEEDING CLUTCH FLUID LINE, Procedure
Reservoir cover screws	1.1-1.4 Nm	10-12 in-lbs	2.18 FRONT BRAKE CALIPER, Installation
Retainer nut, left side fork cap	17.5-22.5 Nm	12.8-16.6 ft-lbs	2.32 FRONT FORK, Assembly/Fork cap against retainer nut
Retainer nut, right side fork cap	17.5-22.5 Nm	12.8-16.6 ft-lbs	2.32 FRONT FORK, Assembly/Fork cap against retainer nut
Seat retaining post	6-10 Nm	53-88 in-lbs	2.38 SEAT, Installation
Secondary clutch actuator, bleed screw	9-11 Nm	80-97 in-lbs	2.12 CLUTCH MASTER CYLINDER AND RESERVOIR, Installation
Secondary clutch actuator cover fasteners	6-10 Nm	53-88 in-lbs	2.15 SECONDARY CLUTCH ACTUATOR, Installation
Secondary clutch actuator cover fasteners	6-10 Nm	53-88 in-lbs	2.16 BLEEDING CLUTCH FLUID LINE, Procedure
Secondary clutch actuator cover fasteners	6-10 Nm	53-88 in-lbs	6.3 CLUTCH, Installation
Secondary clutch actuator cover mounting bolts	6-10 Nm	53-88 in-lbs	2.12 CLUTCH MASTER CYLINDER AND RESERVOIR, Installation
Secondary clutch actuator crankcase cover fasteners	10 Nm	88 in-lbs	6.3 CLUTCH, Installation
Secondary clutch actuator fasteners	10 Nm	88 in-lbs	2.15 SECONDARY CLUTCH ACTUATOR, Installation
Shifter arm clamp bolt	14-16 Nm	132-144 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Shifter linkage to shifter arm bolt	9-15 Nm	80-133 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Shift linkage fastener	9-15 Nm	80-133 in-lbs	2.9 RIDER FOOTRESTS AND FOOT CONTROLS, Rider Footrests
Shock absorber bolts, lower	41-68 Nm	31-50 ft-lbs	1.5 MAINTENANCE SCHEDULE, General

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FASTENER	TORQUE VALUE		NOTES
Shock absorber bolts, upper	41-68 Nm	31-50 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Shock mount fasteners	41-68 Nm	31-50 ft-lbs	2.36 REAR SHOCK ABSORBERS, Installation
Side cover fastener	4.1-6.8 Nm	36-60 in-lbs	7.6 MAIN FUSE, Replacement
Side cover fasteners	4.1-6.8 Nm	36.3-60.2 in-lbs	1.7 AIR CLEANER AND EXHAUST SYSTEM, Installation
Side cover fasteners	4.1-6.8 Nm	36.3-60.2 in-lbs	6.9 DRIVE BELT, Replacement
Solenoid cable terminal ring	6-10 Nm	53-88 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Spark plugs	23 Nm	17 ft-lbs	1.5 MAINTENANCE SCHEDULE, General
Spark plugs	23 Nm	17 ft-lbs	1.15 SPARK PLUGS AND COIL, Installation
Spark plugs	23 Nm	17 ft-lbs	1.18 VALVE LASH, Lash Adjustment
Spark plugs	23 Nm	17 ft-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Installation of Cams, Timing Chains and Camshaft Timing
Spring screws	9.7 Nm	86 in-lbs	6.3 CLUTCH, Assembly
Spring washers	22-33 Nm	16-24 ft-lbs	2.25 FRONT WHEEL, Assembly
Stabilizer link ball end locknuts (2)	34-41 Nm	25-30 ft-lbs	2.30 WHEEL ALIGNMENT, Centering Engine
Stabilizer link to frame tab fastener	34-41 Nm	25-30 ft-lbs	2.30 WHEEL ALIGNMENT, Centering Engine
Stabilizer to frame tab	34-41 Nm	25-30 ft-lbs	2.4 LOWER FRAME RAILS, Installation
Starter limiter assembly fastener	46 Nm	34 ft-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Primary Cam Drive Installation
Starter mounting bolts	9.8 Nm	86.7 in-lbs	7.9 STARTER, Installation
Starter solenoid mounting	6-10 Nm	53-88 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Stator mounting fastener	8.2-10.7 Nm	72-95 in-lbs	7.19 ALTERNATOR, Assembly
Steering stem bolt	9.5 Nm	84 in-lbs	1.17 STEERING HEAD BEARINGS, Adjustment (Fall-Away)
Steering stem bolt	9.5 Nm	84 in-lbs	1.17 STEERING HEAD BEARINGS, Adjustment (Fall-Away)
Steering stem pinch bolt (initial torque)	34 Nm	25.0 ft-lbs	2.32 FRONT FORK, Installation
Steering stem pinch bolt (second step)	8-11 Nm	70.8-97.3 in-lbs	2.32 FRONT FORK, Installation
Stoplamp switch	8.5-11.5 Nm	75.2-101.7 in-lbs	7.25 REAR STOPLIGHT SWITCH, Installation
Stud plate nuts	8-12 Nm	70.7-106.1 in-lbs	2.40 LICENSE PLATE BRACKET: VRSCF, Installation: Non-US
Tail lamp screws	1.5-2.0 Nm	13-18 in-lbs	7.14 TAIL LAMP: VRSCF, Installation
Tail lamp screws: VRSCDX	1.5-2.0 Nm	13-18 in-lbs	7.13 TAIL LAMP: VRSCDX, Installation
Thermostat housing fasteners	9.7 Nm	86 in-lbs	5.5 THERMOSTAT, Installation
Thermostat lower hose clamp	3-4 Nm	27-35 in-lbs	5.5 THERMOSTAT, Installation
Throttle body clamp fasteners	1.25 Nm	11 in-lbs	2.8 ENGINE REPLACEMENT, Installation
Throttle housing screws	4-5 Nm	35-45 in-lbs	2.11 THROTTLE CABLES, Assembly and Installation
Top housing fastener	2.2-2.8 Nm	20-24 in-lbs	7.20 INSTRUMENT CLUSTER: VRSCDX, Installation
Top plate fasteners	5-6 Nm	44-53 in-lbs	4.11 FUEL MODULE ASSEMBLY, Installation
TP sensor screws	2.0-2.8 Nm	18-25 in-lbs	4.3 THROTTLE POSITION SENSOR (TP), Installation

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FASTENER	TORQUE VALUE		NOTES
Triple sprocket fastener	23 Nm	17 ft-lbs	3.9 CAMSHAFTS, DRIVE CHAINS AND CAM-SHAFT TIMING, Primary Cam Drive Installation
Turn signal fastener	7.3-8.5 Nm	64.6-75.2 in-lbs	7.16 TURN SIGNALS: VRSCF, Turn Signal Replacement
Turn signal fasteners: VRSCDX (rear)	1.1-2.3 Nm.	9.7-20.3 in-lbs	7.15 TURN SIGNALS AND RUNNING LIGHTS: VRSCDX, Lamp Replacement
upper cooling fan fastener	19-27 Nm	14.0-19.9 ft-lbs	7.27 COOLING FANS, Installation
Upper muffler clamp	61-69 Nm	45-51 ft-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Upper muffler screws	19-27 Nm	14-20 ft-lbs	4.14 EXHAUST SYSTEM: VRSCDX, Installation
Valve stem nut	1.4-1.7 Nm	12-15 in-lbs	2.29 TIRES, Tire Installation
Velocity stack fasteners	6 Nm	53 in-lbs	1.7 AIR CLEANER AND EXHAUST SYSTEM, Installation
Voltage regulator fastener	6-10 Nm	53-88 in-lbs	7.18 VOLTAGE REGULATOR, Installation
VSS mounting fastener	8.2-10.7 Nm	73-95 in-lbs	7.22 VEHICLE SPEED SENSOR (VSS), Installation
Water pump mounting bolts	9.7 Nm	86 in-lbs	5.6 WATER PUMP, Installation

