HONDA

SERVICE MANUAL

86-87

TRX70

FOURTRAX

HOW TO USE THIS MANUAL

Sections 1 through 3 apply to the whole Fourtrax, while sections 4 through 15 describe parts of the Fourtrax, grouped according to location.

Find the section you want on this page, then turn to the table of contents on page 1 of that section.

Most sections start with an assembly or system illustration, service information and troubleshooting for the section. The subsequent pages give detailed procedures.

If you don't know what the source of a problem is, refer to section 16, Troubleshooting.

CONTENTS

1. GENERAL INFORMATION

GENERAL SAFETY

WARNING

If the engine must be running to do some work, make sure the area is well-ventilated. Never run the engine in a closed area. The exhaust contains poisonous carbon monoxide gas.

WARNING

Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in your work area.

SERVICE RULES

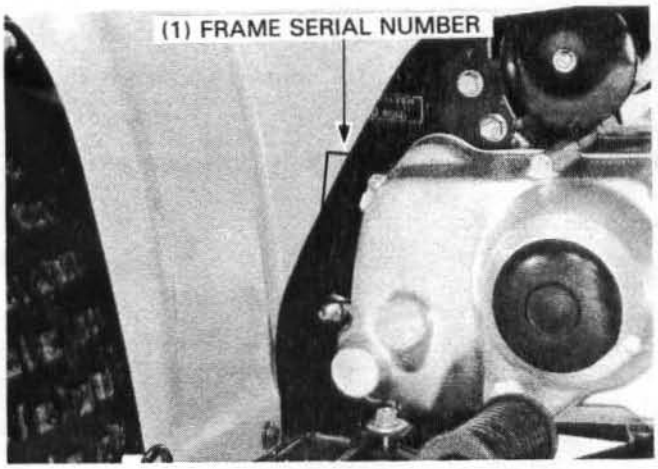
1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalents. Parts that don't meet HONDA's design specifications may cause damage to the Fourtrax.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing this Fourtrax. Metric bolts, nuts and screws are not interchangeable with English fasteners.
4. Install new gaskets, O-rings, cotter pins and lock plates when reassembling.
5. When tightening bolts or nuts, begin with the larger-diameter or inner bolts first. Then tighten to the specified torque diagonally in 2 or 3 steps, unless a particular sequence is specified.
6. Clean parts in non-flammable or high flash point solvent upon disassembly.
7. Lubricate any sliding surfaces before reassembly.
8. After reassembly, check all parts for proper installation and operation.

MODEL IDENTIFICATION

'86:

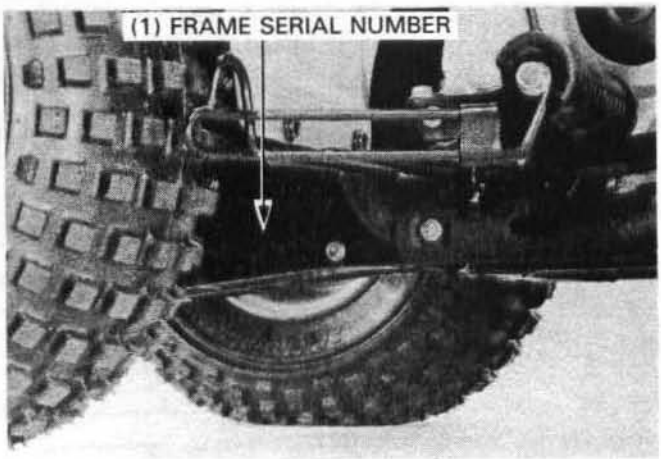
After '86:

'86:

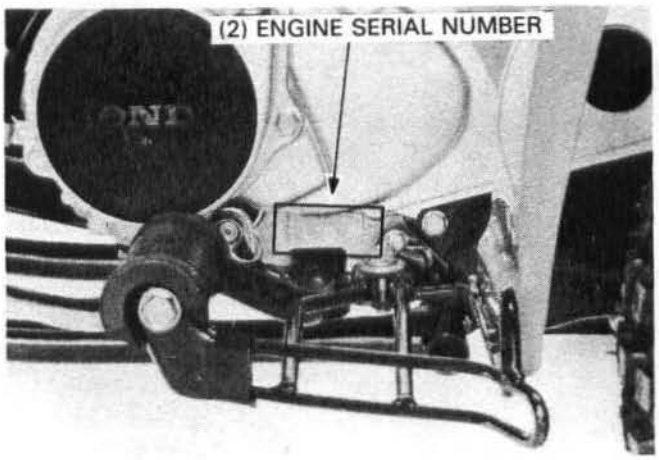


The frame serial number is stamped on the right side of the frame.

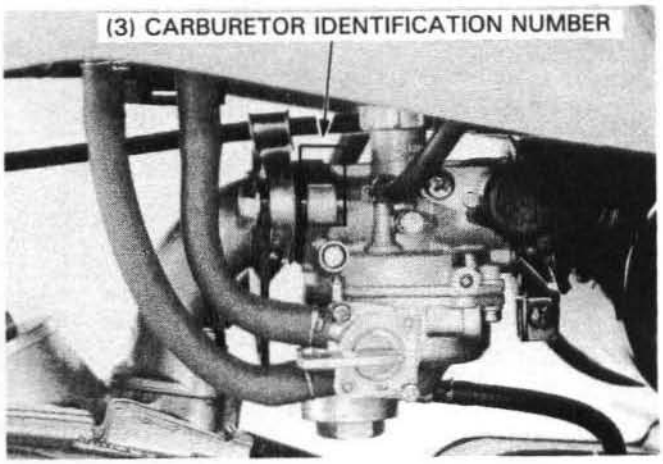
After '86:



The frame serial number is stamped on the right side of the lower main frame.



The engine serial number is stamped on the lower part of the left crankcase.



The carburetor identification number is stamped on the left side of the carburetor.

SPECIFICATIONS

Item		Specifications
DIMENSIONS	Overall length	1,305 mm (51.4 in)
	Overall width	795 mm (31.3 in)
	Overall height	795 mm (31.3 in)
	Wheelbase	895 mm (33.2 in)
	Tread Front	615 mm (24.2 in)
	Rear	610 mm (24.1 in)
	Seat height	570 mm (22.4 in)
	Foot peg height	210 mm (8.3 in)
	Ground clearance	85 mm (3.3 in)
	Dry weight '86:	85 kg (187 lb)
	After '86:	86.5 kg (190 lb)
FRAME	Type	Backbone (Pressed)
	Rim size Front	5 spw x 7DT
	Rear	5 spw x 7DT
	Front tire size/pressure	16 x 8.00-7/2.2 psi (0.15 kg/cm², 15 kPa)
	Rear tire size/pressure	16 x 8.00-7/2.2 psi (0.15 kg/cm², 15 kPa)
	Front brake	Mechanical leading-trailing, drum
	Rear brake	Mechanical leading-trailing, drum
	Fuel capacity	3.8 lit (1.00 US gal, 0.84 Imp gal)
	Fuel reserve capacity	0.9 lit (0.24 US gal, 0.20 Imp gal)
	Caster angle	5°
	Trail length	22.6 mm (0.89 in)
	Camber angle	0°
	Toe-in	5 ± 10 mm (0.2 ± 0.4 in)
ENGINE	Type	Gasoline, air-cooled 4-stroke
	Cylinder arrangement	Single cylinder, 75° inclined from vertical
	Bore x stroke	47.0 x 41.4 mm (1.85 x 1.63 in)
	Displacement	72 cc (4.4 cu in)
	Compression ratio	7.5 : 1
	Valve train	Overhead camshaft chain driven
	Maximum horse power	3.75 BHP/7,000 rpm
	Maximum torque	0.47 kg-m/3,000 rpm (3.4 ft-lb/3,000 rpm)
	Oil capacity	0.7 lit (0.74 US qt, 0.62 Imp. qt) at draining
	Cylinder compression	1,200 ± 150 kPa (12.0 ± 1.5 kg/cm², 170 ± 21 psi)
	Lubrication system	Forced pressure and wet sump
	Intake valve OPENS	0° BTDC } at 1 mm lift
	CLOSES	20° ABDC } at 1 mm lift
	Exhaust valve OPENS	25° BBDC } at 1 mm lift
	CLOSES	5° BTDC } at 1 mm lift
	Valve clearance Intake	0.05 mm (0.002 in)
	(Cold) Exhaust	0.05 mm (0.002 in)
	Idle speed	1,700 ± 100 rpm
CARBURETOR	Identification mark/Type	PB86A/Piston valve
	Venturi diameter	13 mm (0.51 in)
	Main jet No.	#62
	Slow jet No.	#38
	Pilot screw opening '86:	1—3/8 turns out
	After '86:	1—1/8 turns out
	Jet needle setting	3rd groove
	Float level	10.7 mm (0.42 in)

mm (in)

	Item	Specifications
DRIVE TRAIN	Clutch	Centrifugal wet multi-plate
	Transmission	4-speed constant-mesh, semi-automatic
	Primary reduction	4.059 : 1
	Gear ratio I	3.273 : 1
	Gear ratio II	1.938 : 1
	Gear ratio III	1.350 : 1
	Gear ratio IV	1.043 : 1
	Final reduction	2.769, drive sprocket 13T, driven sprocket 36T
	Gear shift pattern	Left foot operated return system, N-1-2-3-4
ELECTRICAL	Ignition system	CDI
	Starting system	Recoil starter
	Spark plug	NGK / ND
	Standard	CR7HS / U22FSR-U
	For cold climate (below 5°C, 41°F)	CR6HS / U20FSR-U
	For extended high speed use	CR8HS / U24FSR-U
	Spark plug gap	0.6—0.7 mm (0.024—0.028 in)
	Ignition timing	25° ± 2° BTDC

TORQUE VALUES

ENGINE

Item	Q'ty	Thread-dia. (mm)	TORQUE: N·m (kg-m, ft-lb)
Cam chain tensioner sealing bolt	1	14	20–25 (2.0–2.5, 15–18)
Intake pipe mounting bolt	2	6	5–9 (0.5–0.9, 4–7)
Cylinder head bolt	1	6	10–14 (1.0–1.4, 7–10)
Cylinder mounting bolt	1	6	10–14 (1.0–1.4, 7–10)
Starter driven pully bolt	4	6	8–12 (0.8–1.2, 6–9)
Valve adjusting screw lock nut	2	5	7–10 (0.7–1.0, 5–7)
Spark plug	1	–	12–19 (1.2–1.9, 9–14)
Valve inspection hole cap	2	–	10–14 (1.0–1.4, 7–10)
Cylinder head cover nut	4	6	9–12 (0.9–1.2, 7–9)
Cam sprocket bolt	3	5	5–9 (0.5–0.9, 4–7)
Cam chain guide roller bolt	1	6	7–13 (0.7–1.3, 5–9)
Clutch lock nut	1	14	38–45 (3.8–4.5, 27–33)
Flywheel nut	1	10	30–38 (3.0–3.8, 22–27)
Shift drum bolt	1	6	9–15 (0.9–1.5, 7–11)
Clutch adjusting screw lock nut	1	8	8–12 (0.8–1.2, 6–9)
Friction plate bolt	1	6	8–12 (0.8–1.2, 6–9)
Fuel strainer cup	1	–	3–5 (0.3–0.5, 2–4)
Oil drain plug	1	12	20–25 (2.0–2.5, 15–18)

FRAME

Item	Q'ty	Thread-dia. (mm)	TORQUE: N·m (kg-m, ft-lb)
Handlebar upper holder bolt	4	8	24–30 (2.4–3.0, 17–22)
Steering shaft nut	1	14	50–60 (5.0–6.0, 36–43)
Steering shaft bushing holder nut	2	8	24–30 (2.4–3.0, 17–22)
Wheel rim bolt	14	8	18–25 (1.8–2.5, 13–18)
Tie rod lock nut	4	10	35–43 (3.5–4.3, 25–31)
King pin nut	2	10	30–40 (3.0–4.0, 22–29)
Ball joint castle nut	4	10	35–43 (3.5–4.3, 25–31)
Handlebar lower holder nut	2	10	40–48 (4.0–4.8, 29–35)
Front wheel bolt	8	8	24–30 (2.4–3.0, 17–22)
Front axle nut	2	12	55–65 (5.5–6.5, 40–47)
Drive chain tensioner nut	2	10	40–50 (4.0–5.0, 29–36)
Front brake arm nut	2	5	4–7 (0.4–0.7, 3–5)
Rear brake arm nut	1	6	7–12 (0.7–1.2, 5–9)
Rear axle nut	2	14	60–80 (6.0–8.0, 43–58)
Rear wheel bolt	6	8	24–30 (2.4–3.0, 17–22)
Rear brake panel bolt	4	8	24–30 (2.4–3.0, 17–22)
Gearshift pedal bolt	1	6	12–14 (1.2–1.4, 9–10)
Brake pedal bolt After '86:	1	8	24–30 (2.4–3.0, 17–22)
Exhaust muffler mounting bolt	3	8	30–35 (3.0–3.5, 22–25)
Rear fender mounting bolt	2	6	10–14 (1.0–1.4, 7–10)
Rear fender/foot peg guard bolt	4	6	10–14 (1.0–1.4, 7–10)
Foot peg guard bolt A	2	8	24–30 (2.4–3.0, 17–22)
Foot peg guard bolt B	2	10	30–40 (3.0–4.0, 22–29)
Foot peg mounting bolt	4	8	18–25 (1.8–2.5, 13–18)
Engine hanger bolt	2	8	24–30 (2.4–3.0, 17–22)

Torque specifications listed above are for the most important tightening points. If a torque specification is not listed, use the standards given below.

STANDARD TORQUE VALUES

Item	TORQUE N·m (kg-m, ft-lb)	Item	TORQUE N·m (kg-m, ft-lb)
5 mm bolt, nut	4.5–6 (0.45–0.6, 3–4)	5 mm screw	3.5–5 (0.35–5, 2–4)
6 mm bolt, nut	8–12 (0.8–1.2, 6–9)	6 mm screw and 6 mm bolt with 8 mm head	7–11 (0.7–1.1, 5–8)
8 mm bolt, nut	18–25 (1.8–2.5, 13–18)	6 mm flange bolt, nut	10–14 (1.0–1.4, 7–10)
10 mm bolt, nut	30–40 (3.0–4.0, 22–29)	8 mm flange bolt, nut	24–30 (2.4–3.0, 17–22)
12 mm bolt, nut	50–60 (5.0–6.0, 36–43)	10 mm flange bolt, nut	35–45 (3.5–4.5, 25–33)

TOOLS

SPECIAL

TOOL NAME	TOOL NUMBER	ALTERNATIVE TOOL	REF. PAGE
Valve spring compressor attachment	07959–KM30100		6-5, 11
Valve adjusting wrench set	07908–GE00000	Not available in U.S.A.	3-7
–Valve adjusting screw	07908–GE00100		3-7
–Valve adjusting wrench	07908–GE00200	or 089201–200–000	3-7
Valve guide reamer	07984–098000A	or 07984–0980000 (U.S.A. only)	6-7, 8
Inspection adapter (C1)	07508–0012500	Not available in U.S.A.	14-2, 4
Spark adaptor	07GGK–0010100	Not available in U.S.A.	14-2

COMMON

TOOL NAME	TOOL NUMBER	ALTERNATIVE TOOL	REF. PAGE
Float level gauge	07401–0010000	07916–3710000 or equivalent	4-6
Lock nut wrench, 20 x 24 mm	07716–0020100	available in U.S.A.	8-4, 12
Extension	07716–0020500	Equivalent available in U.S.A.	8-4, 12
Universal holder	07725–0030000		9-3, 5
Flywheel puller	07733–0010000	07933–0010000	9-3
Valve guide driver, 5.5 mm	07742–0010100	07942–3290100	6-7, 8
Attachment, 32 x 35 mm	07746–0010100		11-12, 19
Attachment, 37 x 40 mm	07746–0010200		10-5
Attachment, 52 x 55 mm	07746–0010400		12-7
Attachment, 24 x 26 mm	07746–0010700		11-20
Pilot, 15 mm	07746–0040300		11-12
			11-19, 20
Pilot, 17 mm	07746–0040400		10-5
			11-12, 20
Pilot, 30 mm	07746–0040700		12-7
Bearing remover shaft	07746–0050100		11-12
Bearing remover head, 15 mm	07746–0050400	Equivalents available in U.S.A.	11-12
Bearing remover head, 17 mm	07746–0050500		11-12
Driver	07749–0010000		10-5
			11-12
			11-19, 20
			12-7
Valve spring compressor	07757–0010000	07957–3290001	6-5, 11
Flywheel holder	07725–0040000		8-4, 12
Universal bead breaker	GN-AH-958-BBI	U.S.A only	11-7
Tire bead breaker set	07772–0050001	or 07772–0050000	11-8
– Breaker arm	07772–0050200	(Not available in U.S.A.)	
– Breaker arm compressor	07772–0050101	or 07772–0050100	
Digital multitester (KOWA) or	07411–0020000	or KS–AHM–32–003 (U.S.A. only)	14-3
Circuit tester (SANWA) or	07308–0020000		14-3
Circuit tester (KOWA)	TH–5H–1		14-3
Driver, 22 mm I.D.	07746–0020100		10-3
Attachment, 20 mm	07746–0020400		10-3

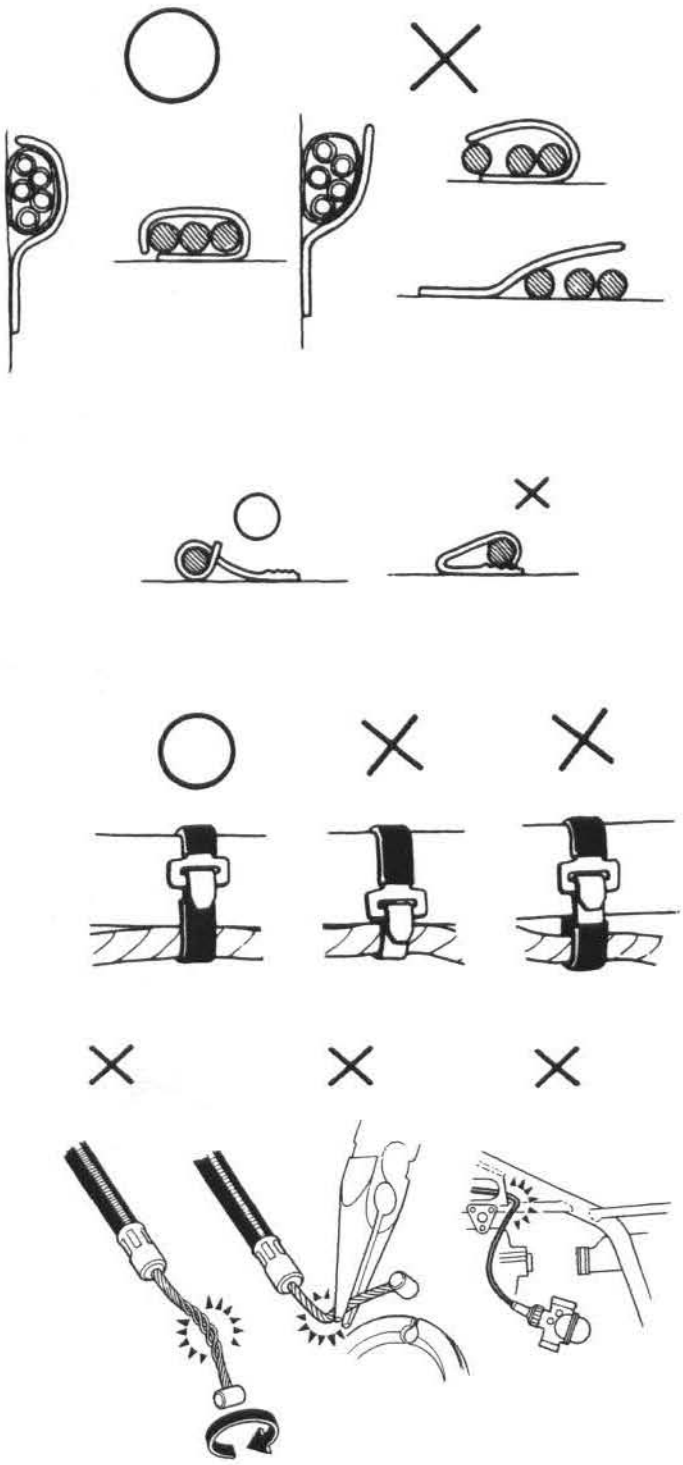
VALVE SEAT CUTTERS

TOOL NAME	TOOL NUMBER	ALTERNATIVE TOOL	REF. PAGE
Valve seat cutter 24 mm (45° IN)	07780–0010600	Not available in U.S.A.	6-9
Valve seat cutter 22 mm (45° EX)	07780–0010701	Equivalent commercially available in U.S.A.	6-9
Valve flat cutter 25 mm (32° IN)	07780–0012000		6-9
Valve flat cutter 22 mm (32° EX)	07780–0012601		6-9
Valve interior cutter 26 mm (60° IN/EX)	07780–0014500		6-9
Valve seat cutter holder	07780–0010101		6-9

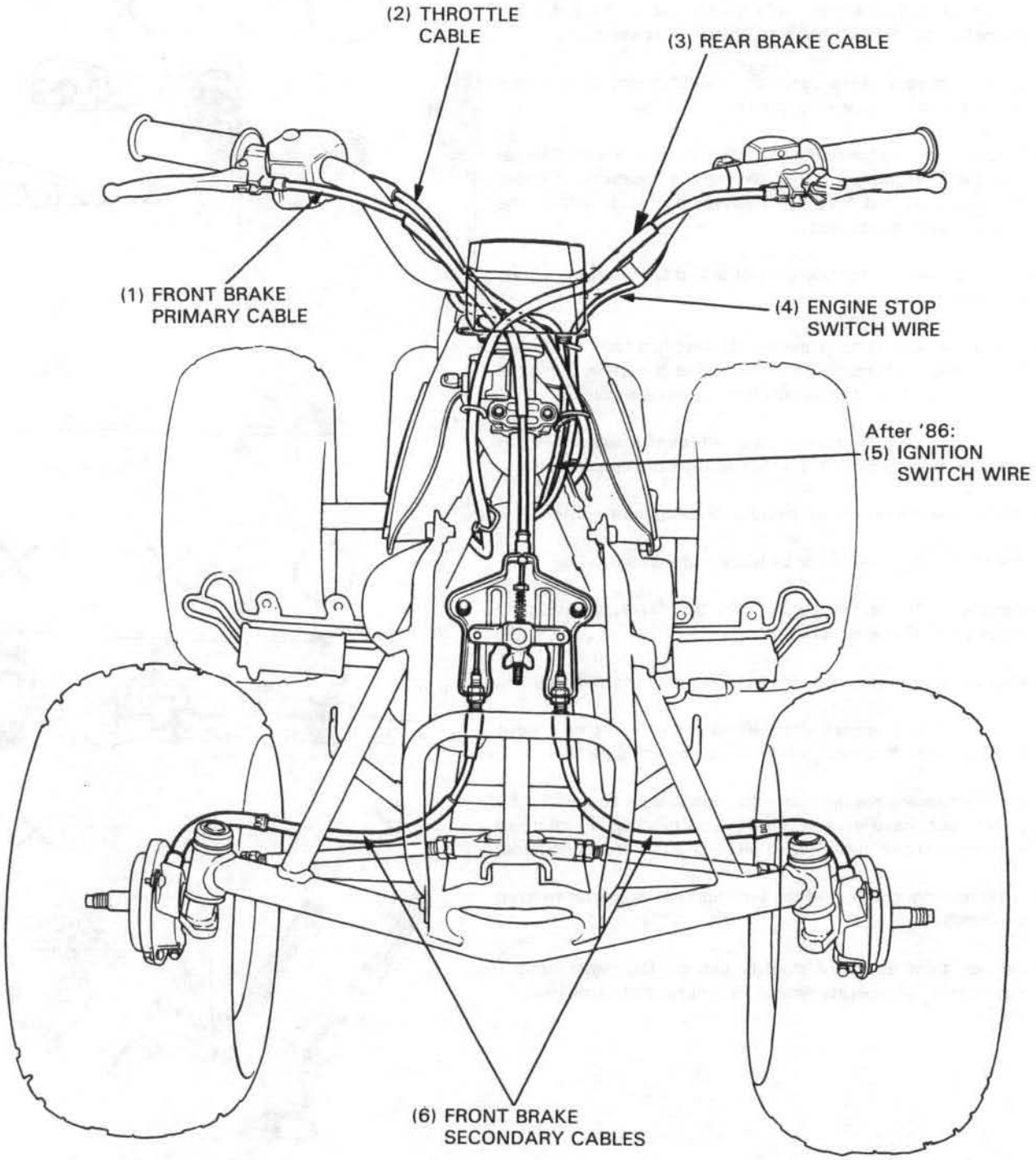
CABLE & HARNESS ROUTING

Note the following when routing cables and wire harnesses:

- A loose wire, harness or cable can be a safety hazard. After clamping, check each wire to be sure it is secure.
- Do not squeeze wires against the weld or end of its clamp when a weld-on clamp is used.
- Secure wires and wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wires or wire harnesses.
- Route harnesses so they are not pulled taut or have excessive slack.
- Protect wires and harnesses with electrical tape or tubes if they come in contact with a sharp edge or corner. Clean the attaching surface thoroughly before applying tape.
- Do not use a wire or harness with a broken insulator. Repair by wrapping them with protective tape or replace them.
- Route wire harnesses to avoid sharp edges or corners.
- Avoid the projected ends of bolts and screws.
- Keep wire harnesses away from the exhaust pipes and other parts that get hot.
- Be sure grommets are seated in their grooves properly.
- After clamping, check each harness to be certain that it does not interfere with any moving or sliding parts.
- Wire harnesses routed along the handlebars should not be pulled taut, have excessive slack, be pinched, or interfere with adjacent or surrounding parts in all steering positions.
- After routing, check that the wire harnesses are not twisted or kinked.
- Do not bend or twist control cables. Damaged control cables will not operate smoothly and may stick or bind.



O: CORRECT
×: INCORRECT


(2) THROTTLE CABLE
(3) REAR BRAKE CABLE
(1) FRONT BRAKE PRIMARY CABLE
(4) ENGINE STOP SWITCH WIRE
After '86:
(5) IGNITION SWITCH WIRE
(6) FRONT BRAKE SECONDARY CABLES

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