

The Complete Book Of Japanese Import Cars

02391 UK 70p \$2.00

# TOYOTA-DATSUN-COLT MAZDA-HONDA-SUBARU

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Maintenance  
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**Toyota Brake Jobs,  
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**Carburetor Teardowns  
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# Honda

## MODEL ROUNDUP

**W**hen Honda first brought its little fun car to the U.S. a couple of years ago, it was marketed only on the West coast and in limited quantities. But the 600 sedan touched a responsive chord with youthful car buyers in Southern California, and first year sales convinced Honda that its "Z" car would also be a winner in the sales race. Honda's second year of marketing cars in the U.S. saw the introduction of the 600 sport coupe, and sales soared. As 1971 drew to a close, Honda placed 19th in import sales in this country and introduced its two cars nationwide. By May 1, 1972, the Honda twins had risen to the 12th spot in import sales, and where they'll stop, we can't say.

Excellent examples of compact design and clever engineering, both Hondas share the same front-wheel drive, air-cooled twin-cylinder sohc engine and mechanical components—only their arrangement and body styling is different. With a bore and stroke of 2.91 x 2.74 ins., the transversely mounted powerplant puts out 36 hp (SAE) from its 36.5-cu.-in. displacement, and if you'll stop laughing long enough to read on, let us assure you that either Honda car will do 75 mph on expressways without straining. Of course, it'll take you awhile to get up there, but with an initial cost below \$1800 and gas mileage in the neighborhood of 35-40 mpg, you can't expect everything.

We've referred to the Honda as a fun car and it's just that. It'll take you where you want to go for just pennies, you can park in otherwise inaccessible spots, and you'll get back to the basics in driving. No other car has captured the public imagination quite so completely, and you'll see very few sedans or sport coupes that have not been treated to some kind of pin striping or custom painting. It's an ideal vehicle with which to express your individuality at low cost and a hardy little beast besides—what more could any automotive fancier ask of his steed?



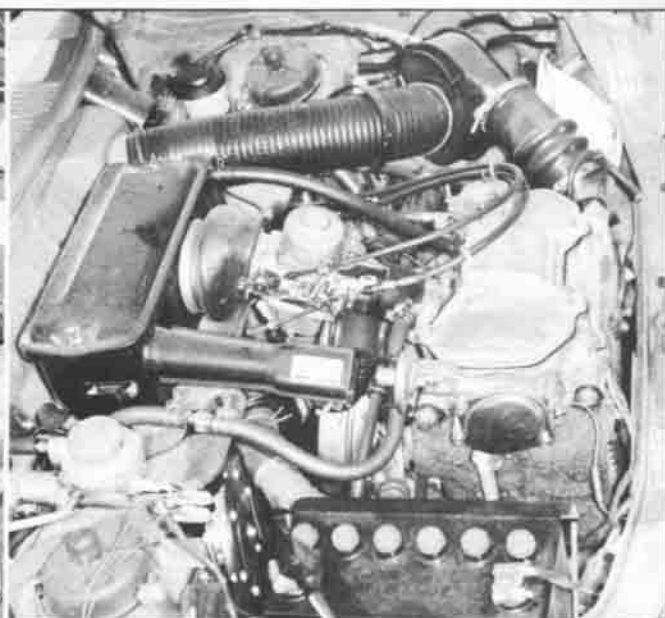
1. Honda's new little car in town is a couple of years old now and has invaded urban areas in droves. This is the staid looking AN600 sedan.

2. The 600 sport coupe looks very much like a miniature AMC Gremlin, but the resemblance ends there.

3. Coupe has aircraft-styled console and interior light on headliner that adds to sporty illusion.

4. Rear seat leg room is extremely limited for adults in either coupe or sedan, but it's not a family car.





5. Both Hondas use same 2-cylinder sohc engine with an output of 36 hp. Arrangement of components is the main difference.

6. Equipped with tach, sport coupe interior is jazzy for diminutive car. Early sedans came with non-synchro transmission, but full synchro-mesh is now standard.

7. As expected, sedan trunk space is limited. Spare tire is stowed in carrier pan beneath floorboard and swings down for access.

8. Coupe has novel arrangement—pull lever inside hatch door opening and panel drops to expose spare tire and tools.

# Honda

# LUBRICATION AND MAINTENANCE TIPS

**O**f all the autos on American roads today, none so aptly fits the description of "personal car" as does the Honda. Whether you own the sedan or sport coupe, or even if you're just considering the purchase of one, here is a vehicle that you can personally take care of with a minimum of knowledge, tools, fuss and bother. And if you do take care of the car, it will reward you with countless miles of carefree driving enjoyed by few owners of other cars. For more than any comparable transportation, the Honda is engineered to run and run and run. And if you take care of it properly, it'll run faster, farther, and better.

Because of the unusual design (as automobiles go) of its engine and trans-axle, there are a few eccentricities involved which we'll point out to you in the following pages. Routine maintenance is a snap, and lubrication in the standard sense is a thing of the past. Steering, suspension, driveshaft and brake/clutch linkage all use a factory-sealed lubrication system, and new components are lubricated when installed—that's it. Front and rear wheel bearings are greased when changed at 30,000-mile intervals. The engine, transmission, and differential form an integral unit in the crankcase, and pouring engine oil into the crankcase filler takes care of everything.

Could anything be easier?

To help you locate, identify and maintain those other areas of your Honda for best performance between servicing, we've provided the visual guide that follows. One last point to bear in mind: Like the BMC Mini before it, to which the Honda is often compared, the chrome finish is not the most durable in the world. Wash often with soapy water and dry with a chamois, especially if you live in a winter-weather area or near salt water. Otherwise, rust will wipe out the chrome finish quickly. Remember, treat your Honda like a personal friend, and it'll respond in kind with miles of trouble-free, enjoyable service.

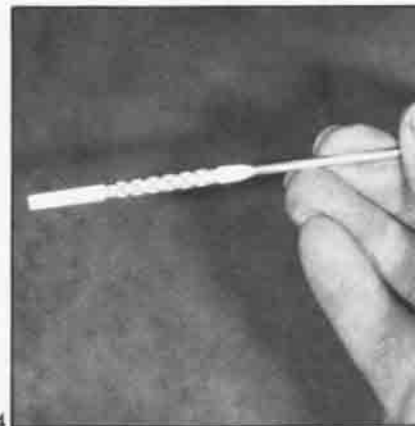


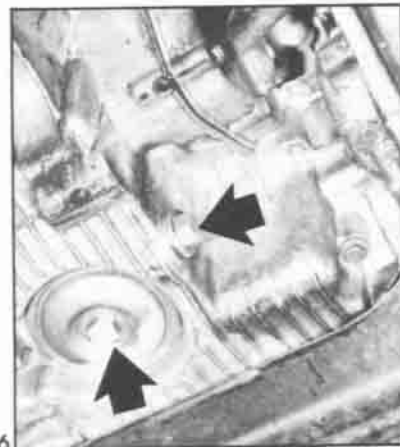
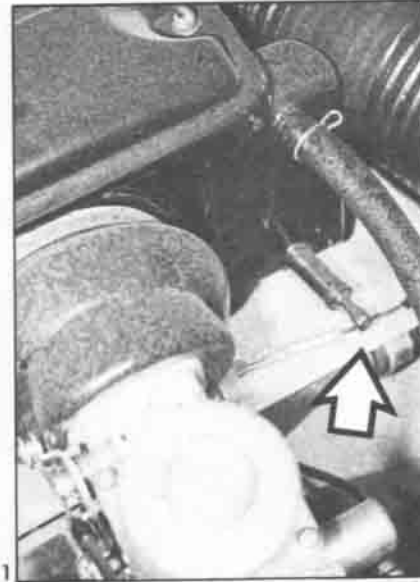
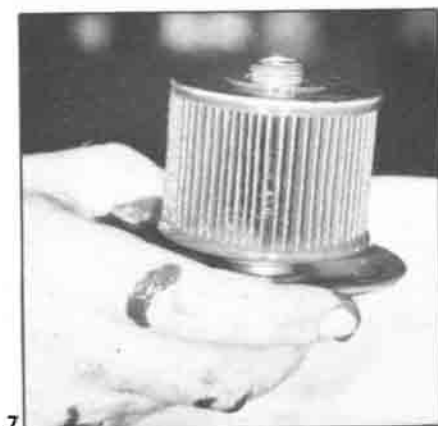
1. Even the girls can keep a Honda car in top shape—it's that easy!

2. Honda sedans use the traditional small car support rod to hold up the hood. Early sport coupes used small sliding latch arm at rear of hood, but owners snapped hood into place without releasing latch and it's been replaced by short version of support rod at rear.

3. The oil dipstick is located just behind the fan belt pulley. Total crankcase capacity is 3.2 qts.—including filter.

4. Reading the dipstick is simple; when full, the oil level should reach the upper mark on the stick. Never let it drop below lower mark.





5. Remove crankcase filler cap (1) to add oil. Spark plugs can be checked by removing connector (2) from plug (3) which sits below hole in engine shroud.

6. Oil drain plug and oil filter are both located on the crankcase bottom. Change oil every 3000 miles and filter every 6000.

7. Honda oil filter elements are removed by loosening the cover mounting bolt and lowering it from the crankcase. If filter becomes plugged, a safety valve inside opens a bypass to prevent engine damage.

8. The air cleaner element is very important. When plugged, it causes a severe drop in engine output. Unscrew cover wingnuts to remove cover and use element retainer to lift old element out.

9. The cellulose filter element can be cleaned by tapping or blowing out with compressed air. Replace at 12,000 miles, or if it shows signs of oil contamination.

10, 11. A chamber in the air cleaner case contains a system to separate oil from the crankcase breather tube. Drain accumulated oil from the chamber every 5000 miles. The sedan drain plug is located at the left (10) of the case; on the coupe, it's positioned at the right (11).

# Honda

## Lubrication and Maintenance Tips



1



2

1. A valve in the air cleaner inlet controls air intake and can be adjusted for summer/winter driving conditions.

2. Similar to a fusible link in operation, the main 45A fuse is positioned on the left fenderwall behind battery, and it blows during an overload before any damage can be done to the wiring harness.

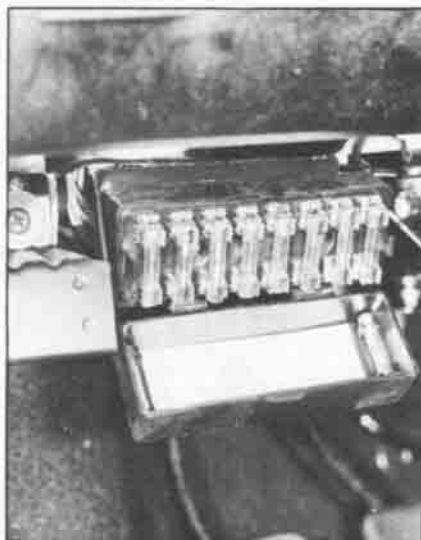
3. Individual fuses are found in fuse box under dash. Cover unsnaps for access and stores two spares.

4. Keeping the battery at its proper level is easy with the Honda car. An upper and lower limit line is imprinted on translucent Yuasa case, a visual help American manufacturers would do well to adopt. Don't let electrolyte drop below lower mark; don't overfill.

5. The coil is a ceramic affair unlike traditional auto coils and is located at front of battery under grille mounting. Coil comes with plug wires attached. To replace, fasten coil in place, remove spark plug connectors from old coil wires and push onto new wires, then connect the two colored wires into electrical circuit.

6. Master brake cylinder (1) is located under heater duct. Hydraulic fluid level is visually checked at fluid reservoir (2) and should not drop below lower level mark. Fluid level will gradually drop as disc brake pads wear, so top up as necessary, but don't fill over the upper level mark.

7. Rear brakes are adjusted with a wrench and external adjustment arm on sport coupes; sedans use an adjusting hole in wheel and require a screwdriver. Turn clockwise until wheel locks, then back off to point where wheel rotates freely.



3



4



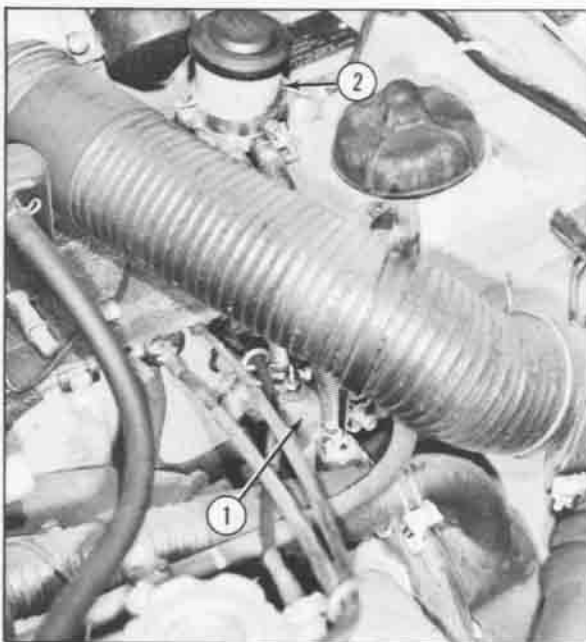
5

ENGINE TYPE	
inline-2, sohc	
CRANKCASE	
CAPACITY (qts.)	
3.2 <sup>1</sup>	
FUEL TANK	
(gals.)	
6.9	
TIRE	
SIZE	
5.20-10	
TIRE PRESSURE (psi)	
FRONT	REAR
26 <sup>2</sup>	26 <sup>2</sup>
DRIVE BELT	
TENSION DEFLECTION (mm)	
15-20	

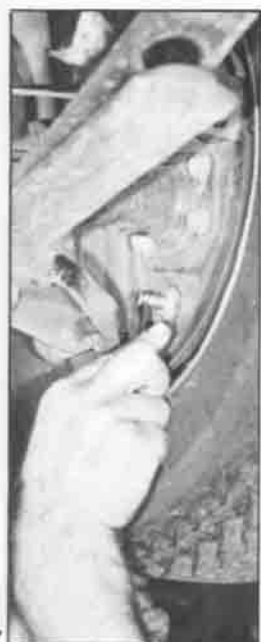
### NOTES:

<sup>1</sup> Includes transmission, differential and oil filter change.

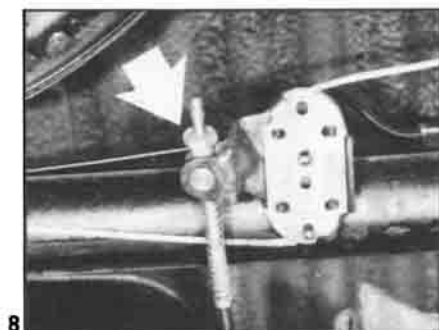
<sup>2</sup> Coupe only; sedan 30/24 psi.



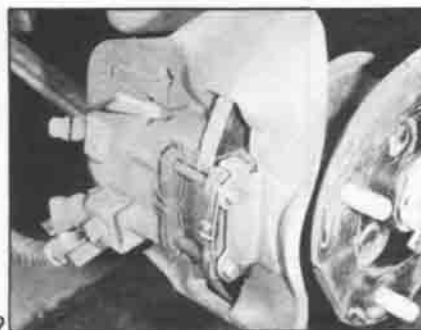
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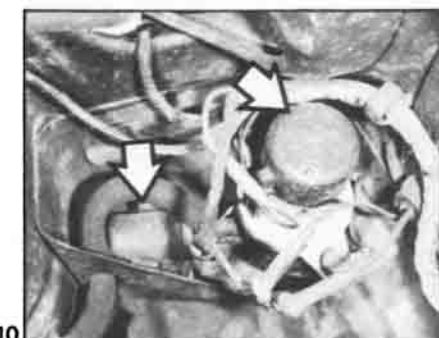
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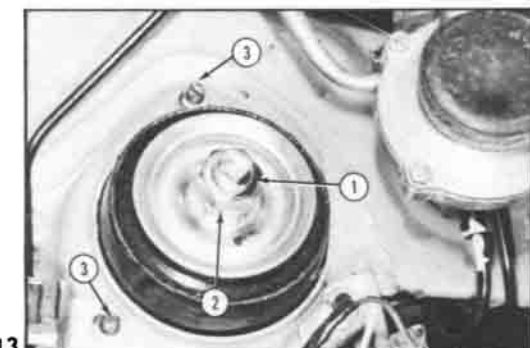
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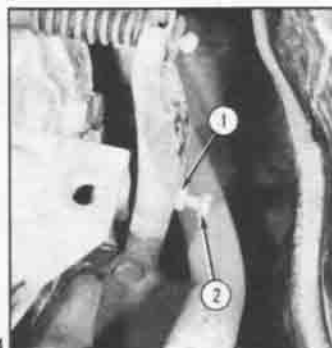
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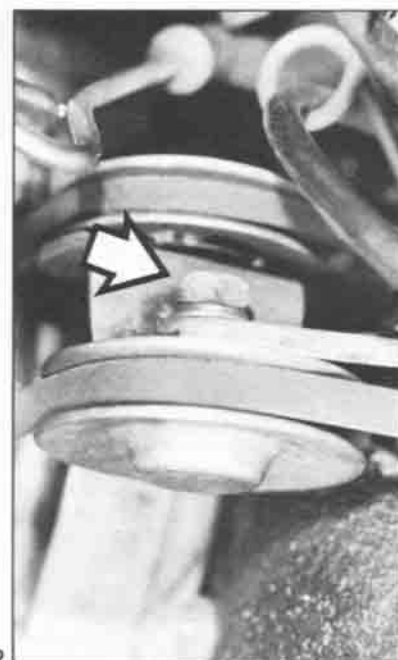
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14



15



12

8. Parking brake lever should require only two or three notches to lock rear wheels completely. Adjustment is made under car with cable adjustment nut (arrow).

9. Honda front wheels are disc braked and the single-piston cylinders are standard in all respects. Check pad wear often as its surface is small, and you want the most from pads when you need it.

10. Placed in the fenderwall corner beneath the heater blower, fuel pump and filter are inaccessible in sedan version without pulling blower unit out. In coupe model, remove rear seat, detach plate underneath and you'll find both resting there.

11. To replace headlamp, raise hood and remove two screws (1) and retaining ring. Vertical lamp adjustment is made with screw at bottom (2); horizontal adjustment with side screw located at (3).

12. Fan belt tension should be adjusted so that belt gap when squeezed together at mid-point is between 3/5 and 4/5-in. Adjust tension with adjustment nut on tension pulley (arrow).

13. Remove the rubber boot and check front shock mountings on each side. Upper nut (1) should be torqued to 32-36 ft.-lbs., lower (2) to 18-21 ft.-lbs. and cap nuts (3) to 11-14 ft.-lbs.

14. Clutch lever play should be between .08 and .12-in. Loosen lock nut (1) and turn adjusting bolt (2) in to decrease play, then tighten lock nut.

15. Rear lamp replacement in coupe is done from inside. Carpet pulls back for access to sockets.

# Honda

# TUNE-UP PROCEDURES

**H**onda owners who lift their hood for others to peek beneath are usually greeted with a laugh or sneer accompanied by a chuckled, "Look at that motorcycle engine!" We'll leave that one to the technical experts to argue over, but regardless of the consensus, tuning the little two-popper couldn't be easier—or more fun. Look at the advantages—no lubrication for life, no cooling system to rust or otherwise foul up, no complicated carburetors to fiddle with—we could go on and on, but let's look at what you do have to contend with. Two spark plugs, one set of breaker points and four valves—that's it.

You can have your tune-ups done at any Honda car dealer and the list grows longer every month, but if you're going on a long trip, we suggest that you carry a few spare parts, a handful of tools and be ready to perform your own minor work. Here's how your Honda car should be tuned, courtesy of the experts at Bill Krause Honda in Inglewood, Calif.



1. Even if you don't keep your Honda car in good running order, it has a redeeming feature—one person can push it along! Regular tune-ups will prevent your participation in a scene like this one.

2. you'll find all basic tune-up specs stamped on this metal plate and located on fenderwall. Keep plate clean and legible for reference.

3. Begin tune-up by disconnecting spark plug connectors and pulling plugs. A compression test after valve adjustment should show each cylinder at 165 psi.

4. Plugs can be cleaned and reused, but since you use only two at a time, we suggest that you be a little generous and replace them rather than run on marginal plugs.

5. Remove the breather tube from the camshaft housing. The Honda car has no PCV valve.

6. Camshaft housing unbolts for access to the valves.



7. Rotate crankshaft with wrench until left intake and right exhaust valve rocker arms are closed equally. Check clearance (.006) with feeler gauge. Loosen rocker arm lock bolt and turn shaft in to decrease clearance, or out to increase it. Tighten lock bolt, torque to 25-28 ft.-lbs. and recheck. Rotate crankshaft and adjust other two valves. Engine should be cold when you do this job.

8. Remove two screws holding breaker compartment lid to expose points and condenser.

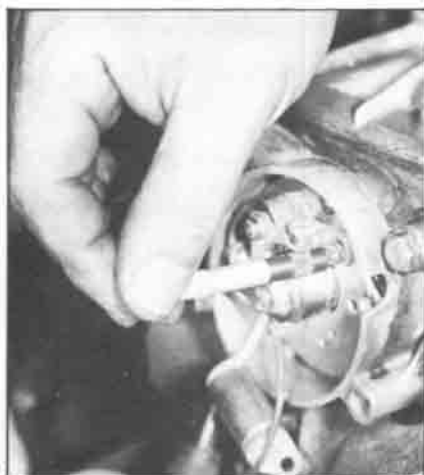
9. Take a good look at the arrangement inside if you're not accustomed to working on gadgets like this.

10. Depress the lower breaker point arm to visually inspect condition. If points are not pitted or burned, you can file and readjust them. Gap should be set with feeler gauge at .012 to .016-in.

11. If you have to replace points and condenser, removal will strip distributor down to breaker plate—remember how it used to look?

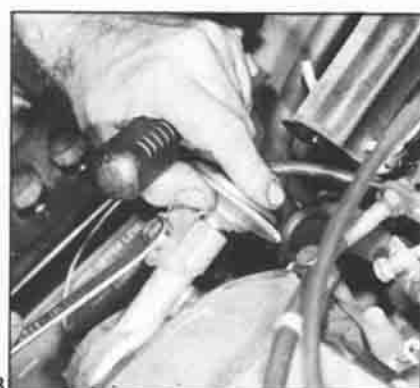
12. Two lock screws hold breaker points in place. A small screw-driver like this is great for tight places.

13. Condenser will easily fit in place with one screw.



# Honda

## Tune-Up Procedures



1. Slip condenser wire and grommet into slot at side of housing, then rotate the crankshaft just until the points start to open.
2. At that point, the groove on crankshaft pulley should coincide with the "F" timing mark on the fly-wheel housing cover.

3. Loosen lock bolt on ignition timing adjustment plate and move it toward rear of car to advance timing, or toward front of car if you want to retard the timing.

4. Connect a 12-volt lamp across primary wiring to ground. Turn crankshaft with ignition switch on, and light will come on when points open. This is more precise than visual determination. You can also use a timing light if desired, but the setup above is just as good and less expensive.

5. Carburetor is last step. Adjust the throttle stop screw to maintain an engine idle of 1150 rpm. Fast idle is set by bending tip of throttle link plate until engine idles at 4000 rpm with choke pulled all the way out. This adjustment should not be necessary under normal circumstances.

6. Idle mixture is set with this pilot screw. Adjust only within the range of the limiter cap.

7. Similarity to a motorcycle engine is apparent. The camshaft is driven by a sprocket located at its middle. Chain that drives the sprocket is driven by another sprocket at the middle of the crankshaft. Air cooling, and a single oil supply for engine and transmission, make this a neat, uncomplicated engine.

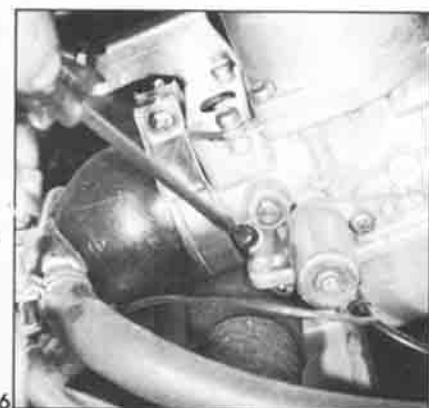
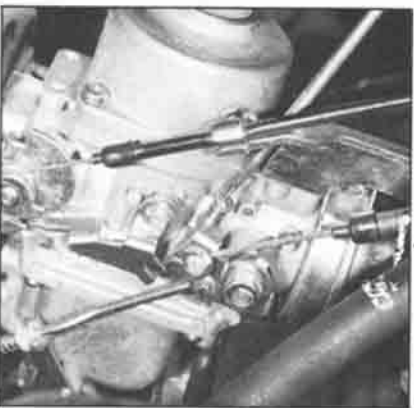
8. We hope you don't have to go this far in your tune-up. Only thing tricky about the engine is the AC generator in the flywheel, but even that is standard motorcycle practice.

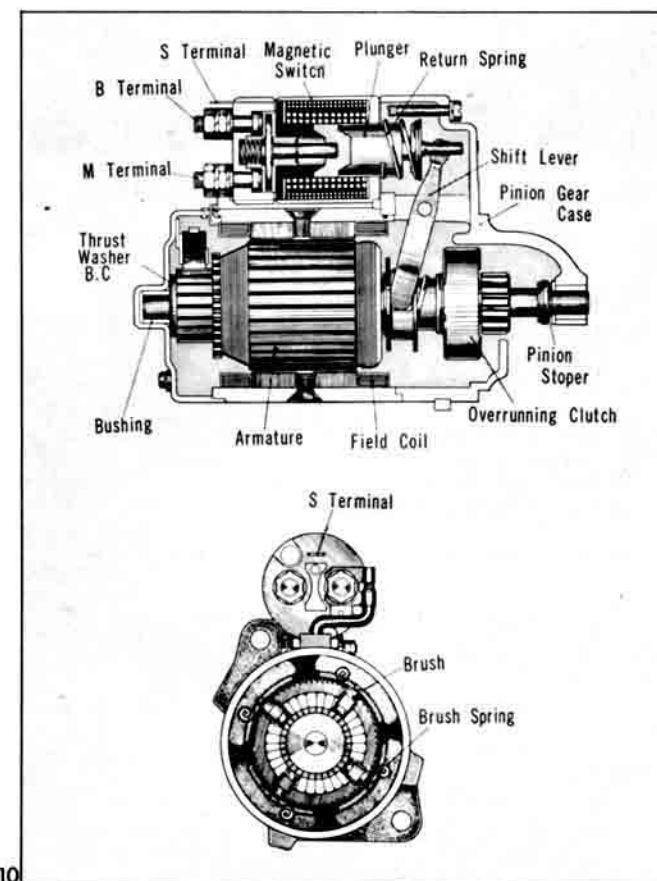
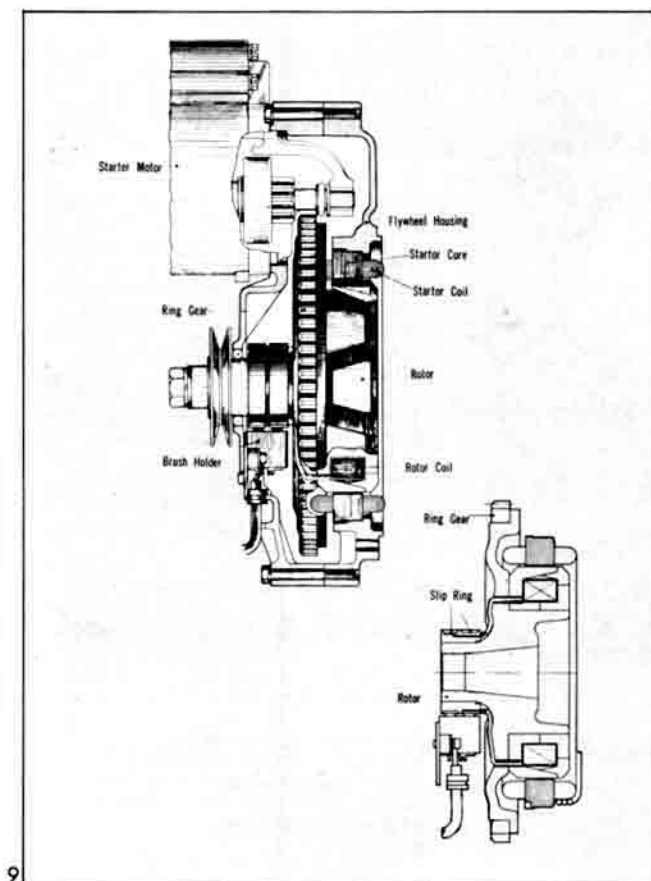
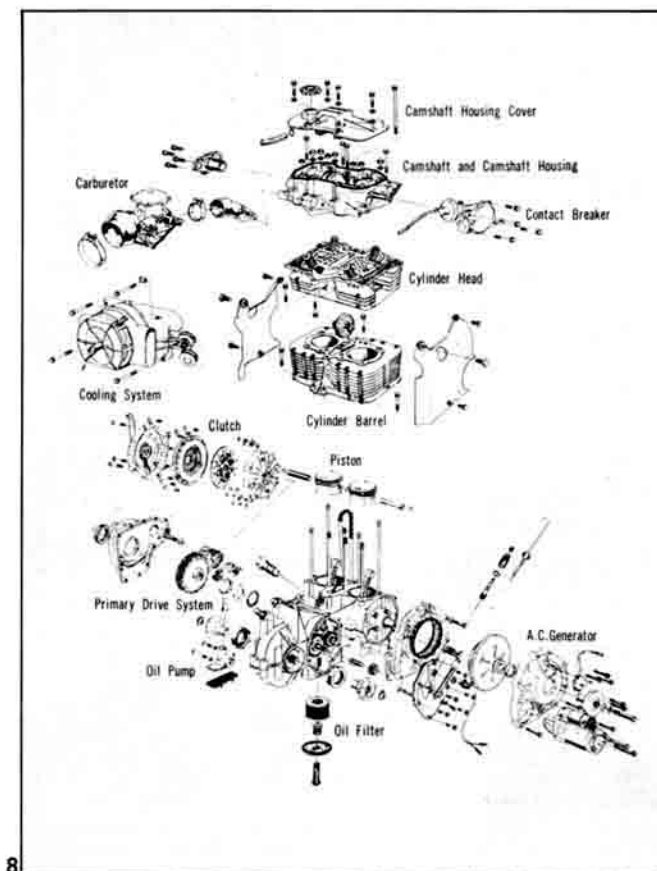
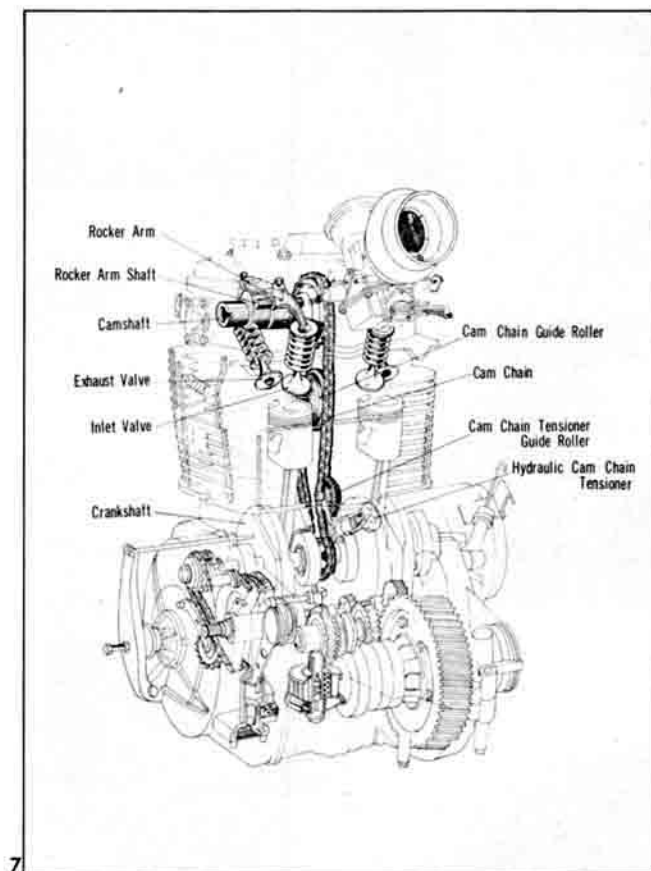
9. Cutaway of flywheel shows brushes and AC generator mechanism. A separate voltage regulator and rectifier (to change the AC to DC) make up the rest of the charging system.

10. Starting motor is an overrunning clutch type very similar to those used on General Motors cars.



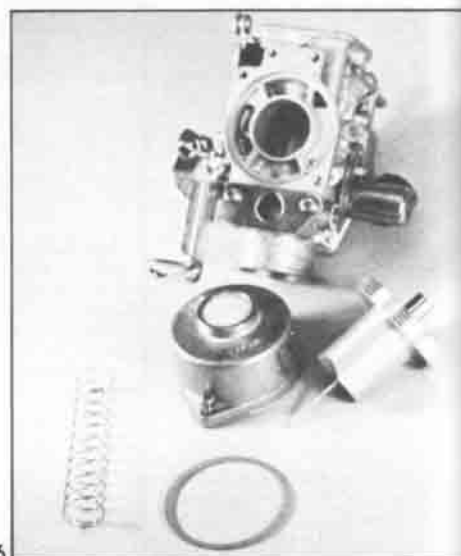
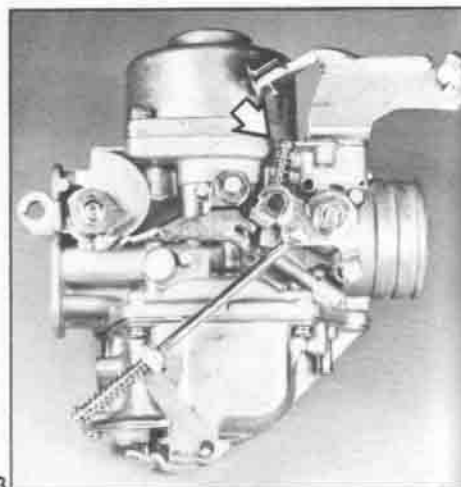
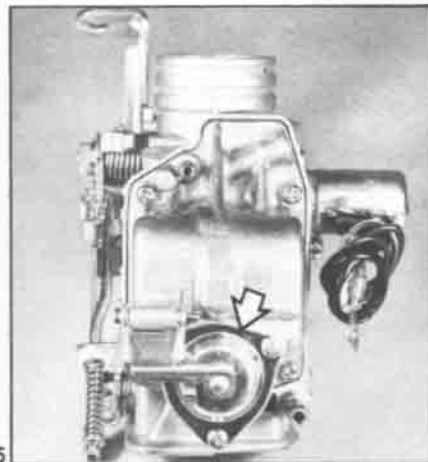
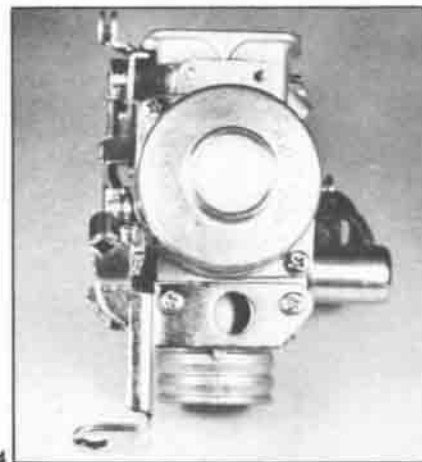
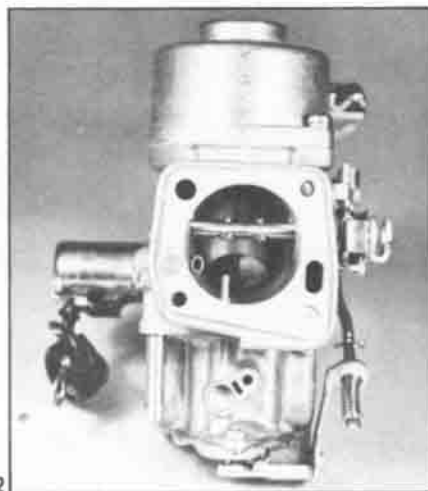
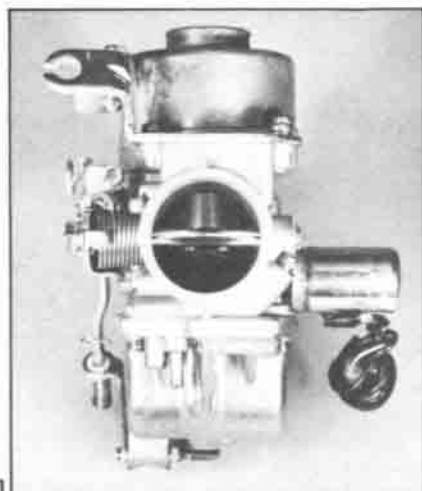
<b>ENGINE TYPE</b> 4-cycle 2-cylinder inline sohc	
<b>DISPLACEMENT</b> 598.4cc 36.5 cu. ins.	
<b>NET HP (SAE)</b> 36	
<b>COMPRESSION PRESSURE</b> (psi @ 400 rpm) 165	
<b>SPARK PLUG</b>	<b>GAP (in.)</b>
<b>TYPE</b> NGK B-8ES Nippondenso W24ES	.028-.032
<b>CONTACT POINT</b>	<b>DWELL</b>
<b>GAP (in.)</b> .012-.016	—
<b>VALVE CLEARANCE (in.)</b>	
<b>INTAKE</b> .004 (cold setting)	<b>EXHAUST</b> .004
<b>IGNITION TIMING</b> 10° BTDC	
<b>IDLE SPEED (rpm)</b> 1150	
<b>FLOAT HEIGHT (in.)</b> .82	



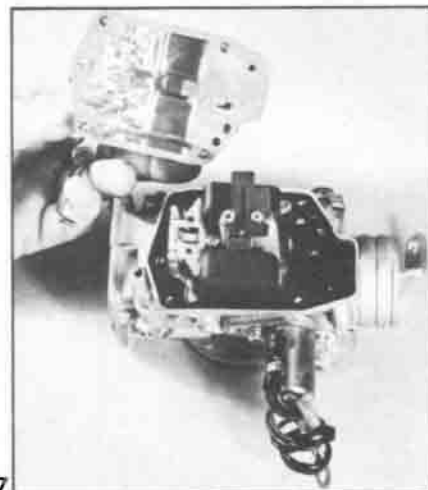


# Honda

## CARBURETOR TEARDOWN



**H**onda's car division does not like it when you refer to their mini-car as a 4-wheel motorcycle. They evidently feel motorcycle nuts and car nuts are two different kinds of people, and they don't want to mix them up. We know from close examination that the Honda car is not a motorcycle. It doesn't even have a motorcycle engine under the hood, but it sure has a lot of parts that look like they would fit on a bike. The carburetor they use is a constant vacuum type with a piston similar to the British SU. Older model Hondas used a diaphragm instead of a piston, but the diaphragm was a weak point as it would wear and split, letting the piston drop down and allowing you to run around town at about 5 mph. Our disassembly is on the piston-type carburetor.



1. Engine side of carburetor shows throttle valve but no conventional flange. Honda carburetor attaches with a hose clamp and rubber hose in the best motorcycle tradition. Solenoid on side of carburetor is hooked to ignition switch and shuts off fuel to idle circuit when switch is turned off to prevent after-running.

2. Air cleaner side of the carburetor shows the manual choke valve.

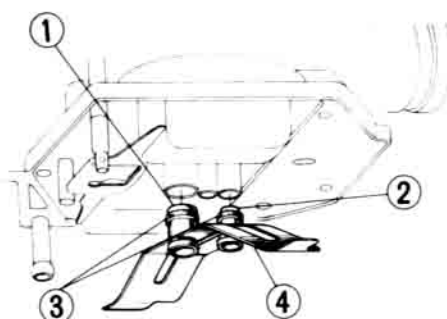
3. Long diagonal rod is connection between throttle linkage and accelerating pump arm. Idle speed screw is shown at arrow.

4. Top of carburetor reads KEIHIN, the manufacturers name and shows the large dome that houses vacuum piston.

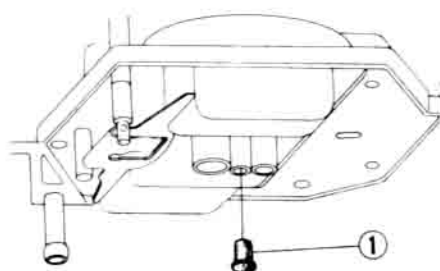
5. The accelerating pump (arrow) is mounted under the float bowl.

6. Carburetor is amazingly easy to take apart. Just remove the cap and a vacuum piston comes out with spring. Needle on bottom of piston sticks into main jet.

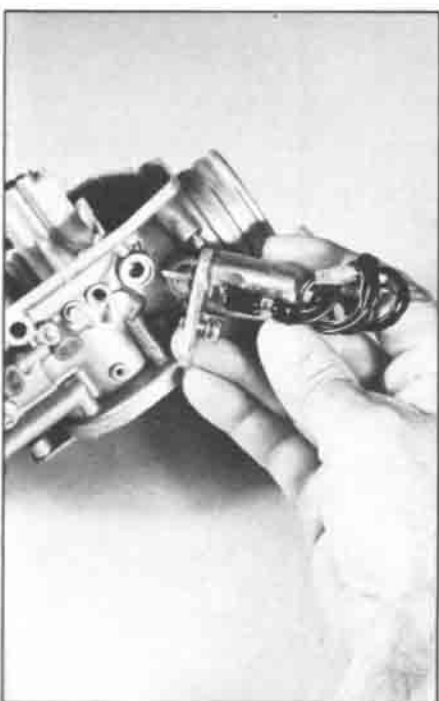
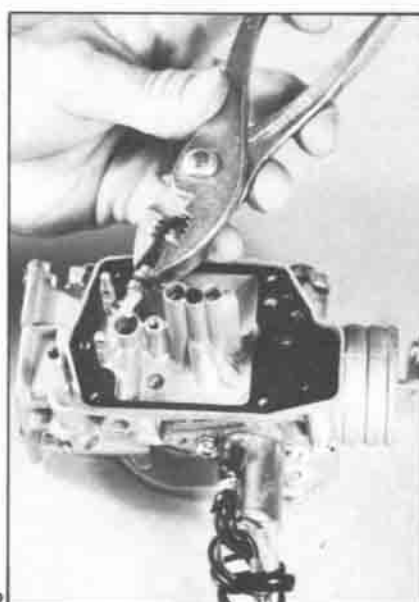
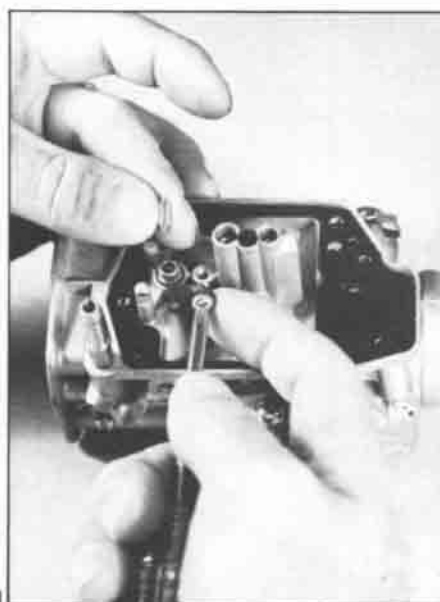
7. The bowl is also easy to take off, revealing float and jets.



- ① Needle Jet                      ③ O-Ring  
② Primary Main Jet Nozzle    ④ Clip Plate A



- ① Rubber Cap



8. The two jets are just pushed into the holes with O-rings to keep them from leaking. The float bowl itself pushes on the bracket to keep the jets from falling out.

9. Details of the jet arrangement are shown here. Before the jets and bracket are installed, the rubber cap must be firmly inserted in the center hole.

10. Pull the pin, and the float will come loose in your hand. It is adjusted by bending the tab.

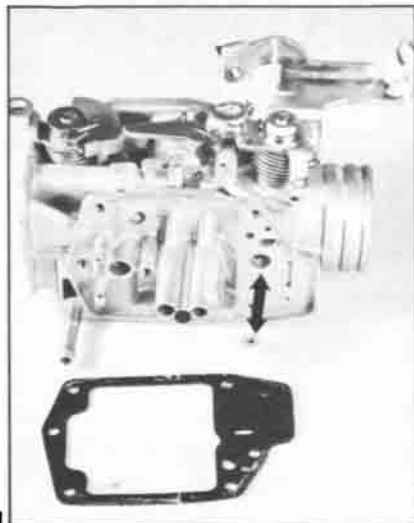
11. An Allen screw and bracket holds the needle seat in place.

12. Pulling needle seat with pliers must be done gingerly, or you can do some damage. Leakage is prevented by an O-ring around the seat.

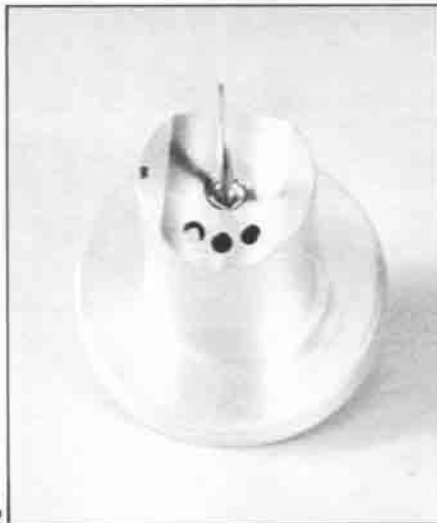
13. No maintenance is required on the solenoid except to keep it clean, and be sure you don't dump it in any cleaning solution.

14. Jet nozzles are underneath the jets. They will fall out when you invert the carburetor.

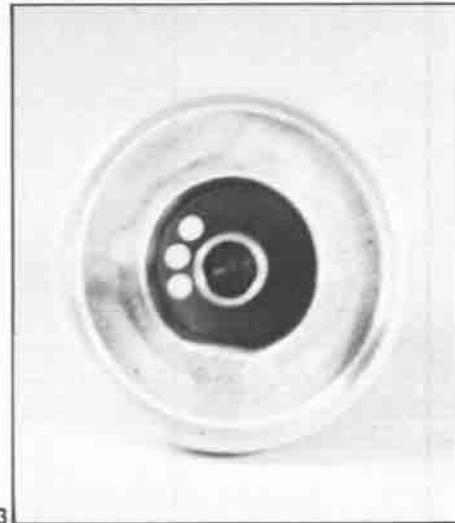
# Honda Carburetor Teardown



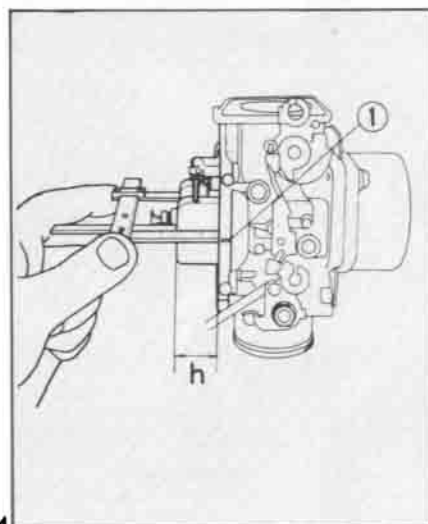
1



2



3



4

1. Small restrictor bushing goes in the hole indicated and is held in place by the float bowl gasket.

2. Three holes in the bottom of the piston allow vacuum to act on its upper side and raise or lower it according to engine load.

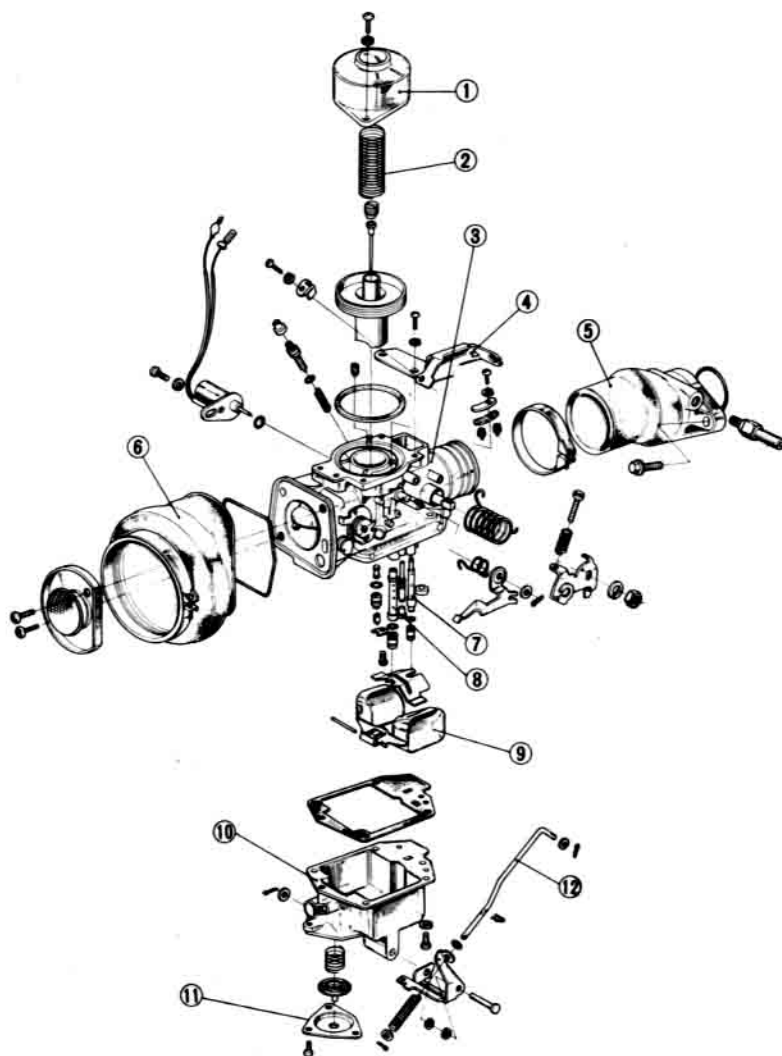
3. A screw plug down inside piston holds needle in place. Ordinarily, needle position will not have to be adjusted, but it can be if you place shim washers under its head.

4. Drive float level is checked with carburetor in this position, so that the float tang barely touches needle. You don't want weight of float to push in needle spring while you check level. Dimension "h" should be .820-in. Note that scale is held next to mark (1) on carburetor casting.

5. This is late-model carburetor with the vacuum piston.

6. Early model carburetor with piston operated by diaphragm. Note the O-ring in edge of float bowl that seals the accelerating pump passage.

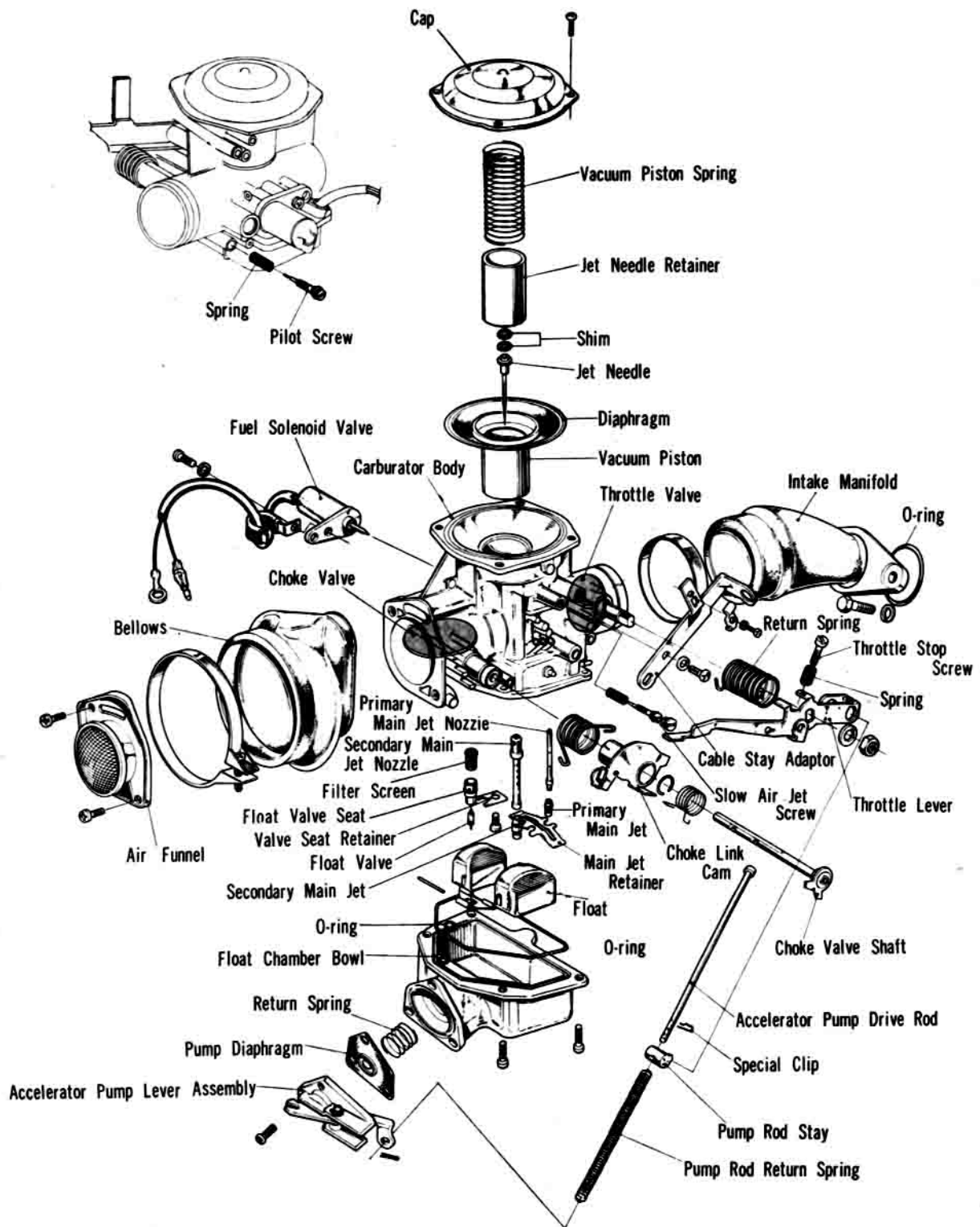
5



- ① Carburetor Cap
- ② Vacuum Piston Spring
- ③ Carburetor Body
- ④ Plate A Stay

- ⑤ Intake Manifold
- ⑥ Air Cleaner-To-Carburetor Bellows
- ⑦ Primary Main Jet Nozzle
- ⑧ Needle Jet

- ⑨ Carburetor Float
- ⑩ Float Chamber Body
- ⑪ Accelerator Pump Cover
- ⑫ Accelerator Pump Drive Rod



# Honda

# A CUT-DOWN PICKUP

**T**hese days, you can expect to see most anything on the street, including custom Honda pickups such as this one created for a leading Southern California Honda dealer. It attracts a lot of notice, which is exactly why it exists. A close look at the results gives one the feeling that Honda (or someone) is missing a good bet—see if you don't agree.

**1. Not a bird or plane, just a Hawaiian Honda pick-up. A Hawaiian Honda pick-up????**

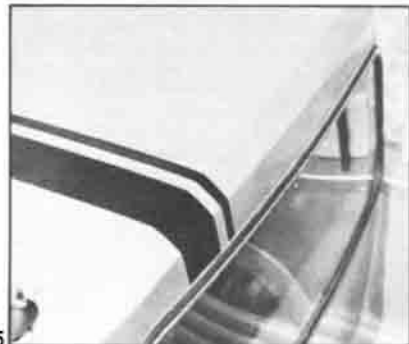
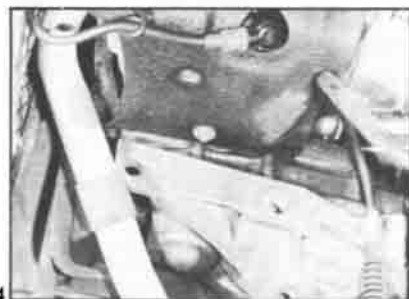
**2. That's right, a 1971 Honda 600 sedan (Hawaii export version) converted for Bill Krause Honda of Inglewood, Calif.**

**3. The smooth and graceful lines are the sign of a pro at work. Cost of conversion was \$1600.**

**4. Cam and carb changes in U.S. version detune engine to 36 hp for emission control and longer engine life at freeway speeds. Without emission control exhaust under the hood, there's lots of room for clutch adjustment and other work.**

**5. Contoured roof line across back is so natural in styling that it looks like factory work.**

**6. Honda cars exported to Hawaii use same 45-hp engine as domestic Japanese version. Extra horsepower comes from different carb, cam, headers, and fewer emission controls.**



## IT'S THE REAL THING

**H**onda's TN-III Deluxe is an unusual curiosity piece and relatively few exist in the U.S., all in the hands of Honda dealers who'd rather fight than sell this one. It's a rugged little carrier about 18 ins. longer than the Honda car and adaptable to a lot of different hauling tasks. In addition, it's the most fun to drive of any mini-pickup we've seen, and although we have no use for it at all in terms of work to do, we think it'd be just dandy to have around for the heck of it.

**1. Want it? Can't have it! Honda doesn't market the TN-III Deluxe in the U.S. at this time.**

**2. All three sides of bed will drop for loading or carrying oversize articles. Payload is 1200 lbs.**

**3. Frank Tift of Bill Krause Honda in Inglewood, Calif. shows us battery and spare tire location.**

**4. Gas tank, fuel pump and oil filler are located on opposite side from tire and battery.**

**5. Some adjustments to engine can be made from either side. Low gear winds out in about 10 ft. and makes a good stump puller of this one—if the stump isn't too big.**

**6. Cab is also a bit unusual. Master cylinder fluid reservoir is located inside near clutch pedal.**

