Street/Strip Camshafts for Honda/Acura B-Series VTEC Engines
Catalog # 4730
INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before installing your new Street/Strip Camshafts for Honda/Acura B-Series VTEC Engines. If you have any questions or problems, do not hesitate to contact our Technical Hotline at: 1-800-416-8628, from 7am-5pm PST, Mon-Fri, or via e-mail at: Edelbrock@Edelbrock.com. Please fill out and mail your warranty card.

- *Note: Proper installation is the responsibility of the customer. Improper or incomplete installation could result in poor performance, related component damage, potentially severe engine damage, and will void your warranty. If you do not feel comfortable installing these parts, we recommend having the installation performed by a professional mechanic.*

- Description: The Street/Strip camshafts for Honda/Acura B-Series VTEC engines provide best performance up to 9000 RPM. They are ground from chilled iron and nitride hardened for outstanding durability. Due to the increased lift of these camshafts, changing valve springs is required.

Cam Specifications (Vtec Lobe):

	Intake	Exhaust
Advertised Duration	288°	266°
Duration @ .050"	250°	232°
Lobe Lift	.316"	.293"
Gross Lift (With 1.55 rocker ratio)	.490"	.454"
Timing @ .050"	Open: 25° BTDC Close: 45° ABDC	Open: 44° BBDC Close: 8° ATDC
Lobe Separation	104°	
Intake Centerline	100°	

Kit Contents	
Qty.	Description
❑ 1	Intake Camshaft
❑ 1	Exhaust Camshaft
❑ 1	Container of Assembly Lube

- Recommended Related Products:
  Due to the high rpm nature of the Street/Strip Camshafts, a programmable or modified ECU is recommended to overcome the rev limiter for off-highway race vehicles only. Fine tuning on a dyno is recommended for maximum performance. We recommend the use of Edelbrock Adjustable Cam Gears, #4721 (silver) or #4723 (red), to adjust cam timing for best performance. To order a catalog, call (800) FUN-TEAM, or visit www.Edelbrock.com.

- Tools and Additional Parts Required:
  1. Edelbrock #4737 - Street/Strip Valve Spring Kit
  2. Honda #07AA-PR3020A - Tappet Adjuster Wrench
  3. Socket Wrench with 10, 12, 14 & 19mm Sockets (Long sockets or extentions may be required.)
  4. 5/8" Spark Plug Socket Wrench
  5. Long Feeler Gauges (.006" & .008")
  6. Adjustable Torque Wrench
  7. Automotive Sensor Safe Silicone Sealant

INSTALLATION NOTES

- Note: Make sure your engine is in good running condition before installing the Edelbrock Street/Strip Camshafts. If your engine is not in good working order, installation of these high performance camshafts could result in premature engine wear. It is recommended to check the wear of the camshaft journals before installation by checking the oil clearance as shown in the factory service manual. Checking the camshaft end-play, and rocker arm wear is also recommended.

- Remember: When working on your engine, especially when oil or fuel is present, always work in a well-ventilated area. Keep all sparks, open flames, or other sources of ignition away from the work area. Failure to do so could result in a fire or explosion causing vehicle or property damage, personal injury, and/or death.

- Before Beginning: This installation can be accomplished using common tools and procedures. However, you should have a basic knowledge of automotive repair and modification and be familiar with and comfortable working on your vehicle. If you do not feel comfortable working on your vehicle, it is recommended to have the installation completed by a professional mechanic. Keeping your specific vehicle's Service Manual on hand for reference is helpful.

INSTALLATION PROCEDURE

1. Make sure the engine is cool and the vehicle is on level ground. Set the parking brake. If you have an original equipment radio with anti-theft protection, make sure to write down the code before disconnecting the battery. After installation, you will need this code to restore radio operation. It is recommended to clean the valve cover, as well as the area surrounding the valve cover, to avoid getting dirt or debris into the engine. Disconnect the negative cable from the battery.

2. Disconnect the PCV hose and ground wire from the valve cover. Using a 10mm socket, remove the four cap nuts holding the spark plug wire cover. Remove the spark plug wire cover and remove the spark plug wire boots from the spark plugs. Using a 5/8" spark plug socket, remove the spark plugs. This will make turning the engine over in step 5 easier. Using a 10mm socket, remove the remaining eight nuts and washers holding the valve cover, and carefully lift off the valve cover. *(Note: Inspect the valve cover gasket and rubber seals surrounding the spark plug holes. If they are in good condition, they may be re-used).* Set the cover, gasket, and seals aside.

3. Loosen and remove the three distributor mounting bolts using a 12mm socket. Remove the distributor from the cylinder head and rest it carefully next to the head, you do not need to unplug the distributor from the wiring harness. Be careful not to lose the o-ring seal. Inspect the seal for damage. If it is in good condition, it may be re-used.

4. Remove the two bolts holding the middle timing belt cover using a 10mm socket. Remove the middle timing cover and set aside.

5. Turn the steering wheel so the front tires are pointing to the left. Now you can access the crankshaft pulley bolt through the fender liner. Rotate the engine counter-clockwise using a 19mm socket until the no. 1 cylinder is at top dead center (TDC) on the compression cycle. The no. 1 cylinder is at TDC when the white TDC mark on the crankshaft pulley is aligned with the pointer on the lower timing belt cover.

6. Using a 14mm socket, loosen the camshaft sprocket bolts approximately 1/2 turn. Do not remove the bolts. Check that the no. 1 cylinder is still at TDC. If not, continue to rotate the crankshaft pulley counter-clockwise until the no. 1 cylinder is again at TDC.

7. Remove the timing belt tensioner access plug and loosen the belt tensioner adjusting bolt 1/2 turn using a 14mm socket. Push on the belt tensioner to remove tension from the timing belt, then tighten the adjusting bolt to hold the tensioner in place.

8. You may now slide the timing belt off of the camshaft sprockets.

9. Remove the cam sprocket bolts and remove the cam sprockets, being very careful not to lose the cam keys that locate the sprockets onto the camshafts. You may now remove the bolt holding the back timing cover using a 10mm socket. Remove the cover and inspect the seal between the cover and the cylinder head; if it is in good condition, it may be re-used.

10. Using the Tappet Adjuster Wrench, loosen the tappet adjusting screws on all rockers.

11. Loosen the bolts holding the camshaft holder plates and camshaft holders (cam caps) using a 12mm socket on bolts 1-10 and a 10mm socket on bolts 11-14 of each set of camshaft holder plates *(See Fig. 1-A & 1-B)*. To prevent any possible warpage of the plates and cam caps, loosen each bolt 1/3 turn at a time in the sequence shown. Repeat until all bolts are fully loosened.

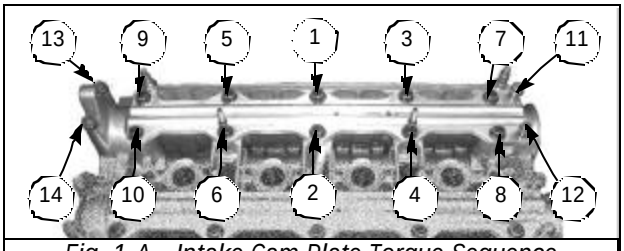


Fig. 1-A - Intake Cam Plate Torque Sequence

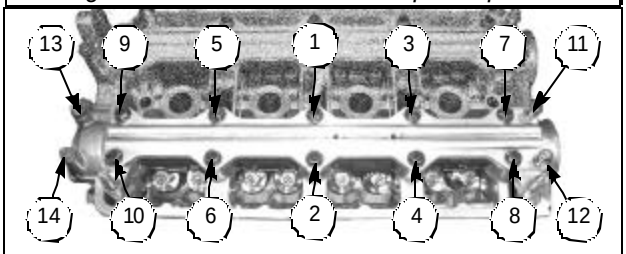


Fig. 1-B - Exhaust Cam Plate Torque Sequence

12. Remove each plate carefully, keeping the intake cam plate and exhaust plate in order, allowing the bolts to remain in their positions in the plates. This will allow the bolts to go back into their original positions and is an easy way to keep them in order. Set the plates aside. Carefully lift the cam caps off of the camshafts keeping them in order. You will notice that each cap is marked with an arrow and number that corresponds to its location. The arrows point toward the timing belt, and they are numbered with no. 1 being closest to the timing belt and no. 5 being closest to the distributor. Make sure to keep the bolts that hold the end cam caps in order as well. *(Note: You may need to pry the cam caps loose before lifting them off. Carefully use a flat blade screwdriver to pry the cam caps loose. See Fig. 2).* There is an oil seal and dowel pin under the no. 3 cam cap. Inspect the oil seal and replace, if necessary.

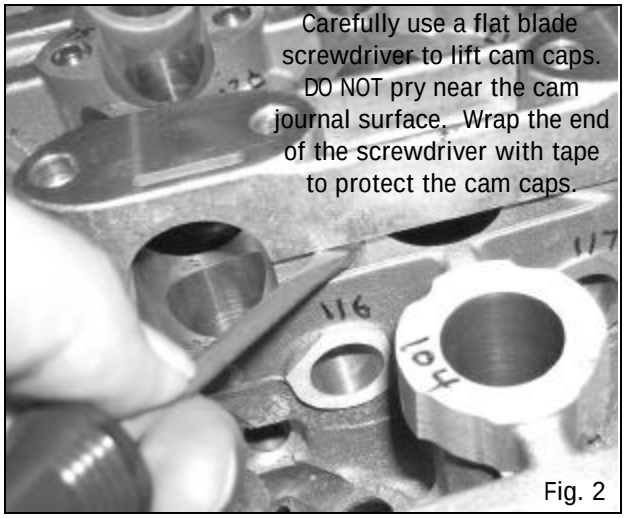


Fig. 2

13. Remove the camshafts one at a time, keeping them in order. *(Note: The oil seals will come out with the camshafts. Take care not to damage the oil seals).* Now is a good time to inspect the rubber cap near the end of the exhaust cam, opposite the timing belt. If it is in good condition, it may be re-used. Make sure the o-ring sealing surface is clean and dry.

14. Remove the oil seals from the camshafts. If they are in good condition, they may be re-used. Install the oil seals onto the new Edelbrock Street/Strip Camshafts with the spring side facing in towards the camshafts.

15. Apply a liberal coating of assembly lube to the journals and lobes of the Edelbrock camshafts. Also, apply a liberal coating of lube to the rocker arm contact surface and to the journal suface in the cylinder head and on the cam caps.

16. Set the camshafts into the head with the keyways facing up. Apply some automotive sensor safe silicone to the mating surfaces of the no. 1 and no. 5 cam caps *(See Fig. 3)*. Make sure the cam caps are in order and set them down on top of the camshafts. Now install the cam holder plates, and torque bolts #1 - 10 to 20 ft/lbs, and bolts #11 - 14 to 7 ft/lbs *(See Fig. 1)*.

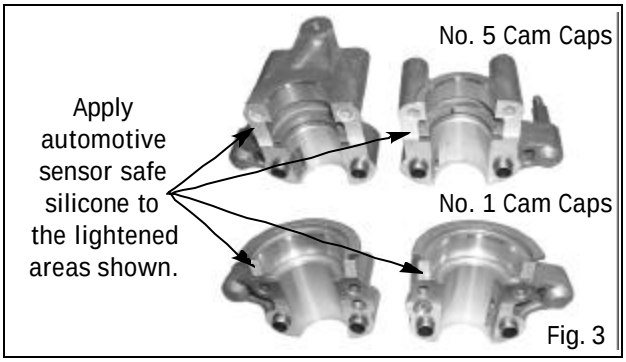


Fig. 3

17. Install the back timing cover and gasket. Torque bolt to 7 ft/lbs. Install the cam sprockets, making sure to use the cam keys. Hand tighten the cam sprocket bolts at this time.

18. Slip the timing belt over the cam sprockets. Loosen the belt tensioner adjusting bolt to allow it to tighten the belt. Tighten the tensioner adjusting bolt to 40 ft/lbs. Tighten the cam sprocket bolts to 40 ft/lbs. Make sure the cam sprockets are aligned properly *(See Fig. 4)*. If you can rotate the belt more than 90° by hand, the belt is too loose. Make sure the tensioner is not stuck by loosening the tensioner adjusting bolt and pulling up on the tensioner with a hook or bent wire hanger, then re-tighten the bolt. Replace the tensioner adjusting bolt access plug.

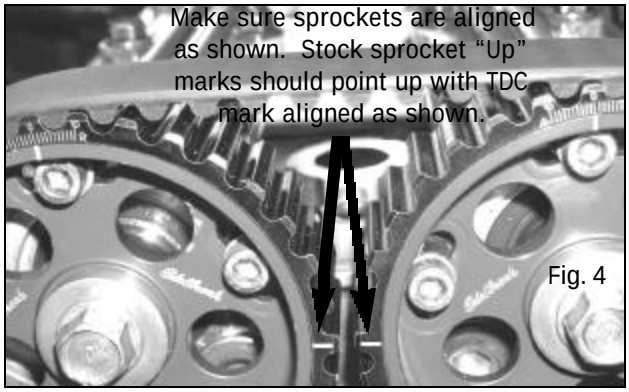


Fig. 4

19. Rotate the engine 5-6 revolutions to seat the belt. Bring the engine around to TDC as in step 5. Make sure the cam sprockets are still aligned properly *(See Fig. 4)*.

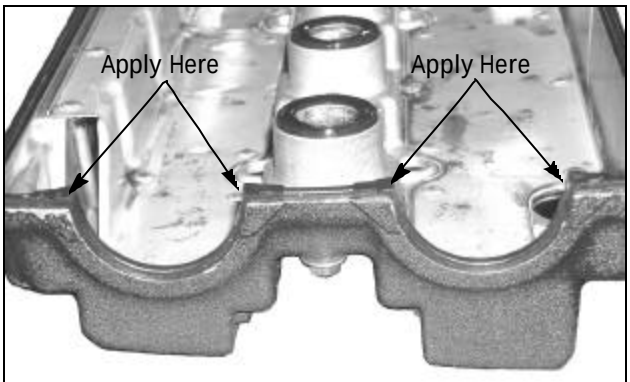
20. Replace the middle timing cover. Torque bolts to 7 ft/lbs.

21. Coat the distributor o-ring with clean engine oil, and install the distributor. Tighten mounting bolts to 17 ft/lbs. *(Note: The distribitor shaft and end of camshaft are notched to elimiinate the possibility of installing the distributor 180° out of time).*

22. Before installing the valve cover, you will need to adjust the valves. Set the no. 1 cylinder at TDC as explained in step 5. Make sure the cam sprockets are aligned properly *(See Fig. 4).* Using the tappet adjuster wrench, adjust the valve lash on the no. 1 cylinder. The intake valve clearances should be set at .006" and the exhaust valve clearances at .008". The feeler gauge should slide between the rocker arm and the camshaft with a slight amount of drag. Tighten the lock nut and re-check the clearance. It should stay at .006" (intake) and .008" (exhaust). Turn the crankshaft 180° counter-clockwise. The cams should have rotated by 90°. Repeat the valve adjustment on the no. 3 cylinder. Rotate the engine 180° again, and repeat the adjustment on the no. 4 cylinder. Rotate again by 180° and repeat the adjustment on the no. 2 cylinder. The valves are now adjusted. After adjusting the valves, re-torque the crankshaft bolt to 130 ft/lbs.

23. Thoroughly clean the valve cover mating surface, being careful not to get any old silicone or dirt into the engine. Clean off the rubber cap near the exhaust cam, put a thin coat of automotive sensor safe silicone around it and install it. Clean the groove in the valve cover and press the valve cover gasket into the groove in the valve cover. Apply a bit of automotive sensor safe silicone at the corners of the gasket that go around the camshafts *(See Fig. 5).* Set the valve cover onto the cylinder head and press down lightly to make sure the gasket is seated. Install the four nuts and washers that go under the plug wire cover and the four cap nuts and washers. Tighten nuts to 7 ft/lbs *(See Fig. 6 for torque sequence)*.

24. Install the spark plugs and wires. Install the wire cover. Tighten cap nuts to 7 ft/lbs. Connect the PCV hose and the ground wire. Connect the negative battery cable.



Apply automotive sensor safe silicone to the corners of the seal on both ends of the valve cover.

Fig. 5

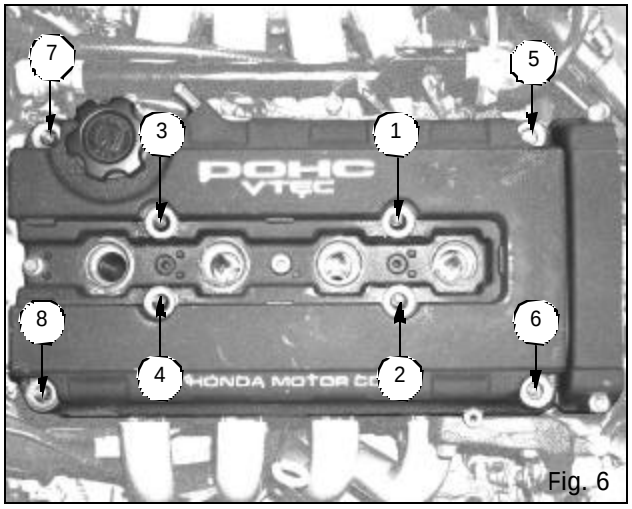


Fig. 6

- Camshaft Run-In Procedure:
  Edelbrock recommends performing a Run-In procedure after installing new camshafts. Make sure the oil level in the engine is at the proper level, and the oil is clean. We recommend using a non-synthetic oil during the break in. Start the vehicle and immediately bring the engine above 2500 rpm for at least 20 minutes. Vary the engine speed constantly to help sling oil around the camshafts. After the run-in, change the oil to remove any assembly lube.

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CAMSHAFT: Street/Strip
CATALOG #: 4730
ENGINE: Honda, B-Series VTEC
RPM RANGE: Idle - 9000 RPM

Advertised Duration:	Int. 288°	Exh. 266°
Duration at .050" Lift:	Int. 250°	Exh. 232°
Lift at Cam:	Int. .316"	Exh. .293"
Lift at Valve:	Int. .490"	Exh. .454"
Intake Centerline:	100°	
Lobe Separation:	104°	

Timing at .050" Lift:

	Open	Close
Intake:	25° BTDC	45° ABDC
Exhaust:	44° BBDC	8° BTDC

Rev. 10/03

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