LEVEL NEXT PERFORMANCE PRODUCTS

YAMAHA SRX120 & ARCTIC CAT ZR120 PERFORMANCE CAMSHAFT WITH SPRINGS

PART# GYR-8JM17

(Revised 2/7/19)

⚠WARNING

Please read and understand these instructions completely before installation to avoid possible injury to yourself, or damage to the accessory or vehicle.

CAUTION:

This installation should be performed by an authorized Yamaha dealer or a qualified mechanic. Some components require information from the model's service manual for proper installation or adjustment. Be sure to have the service manual on hand, if necessary, before proceeding with the installation.

**********PLEASE NOTE**********

Manufacturer and distributor specifically disclaim all responsibility for consequential and incidental damages or any other losses arising from the use of this product. Any dispute arising out of the use of this product must be settled in Linn County, Iowa under Iowa law.

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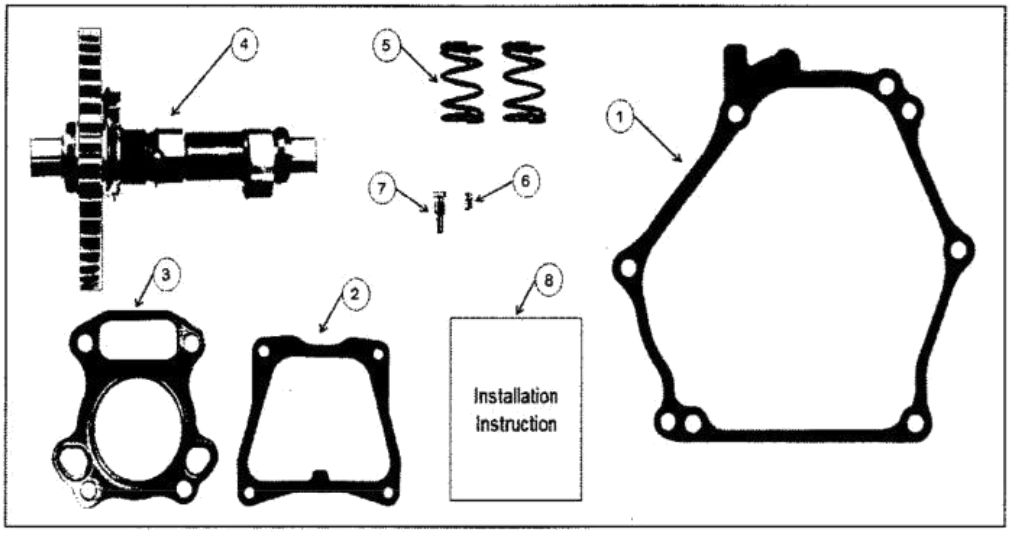
1. PARTS LIST:

This kit contains the following components. Before beginning installation confirm there are no missing or damaged components.

Item #	Part Number	Description	Qty
1	7CN-E5451-01-00	Crankcase Gasket	1
2	7CN-E1193-00-00	Head Cover Gasket	1
3	7CL-E1181-01-00	Cylinder Head Gasket	1
4	*	Camshaft Assembly	1
5	*	Valve Springs	2
6	*	Main Jet	1
7	*	Pilot Jet	1
8	PAK-8JM17-00-00	Instructions	1

* Part only available in kit



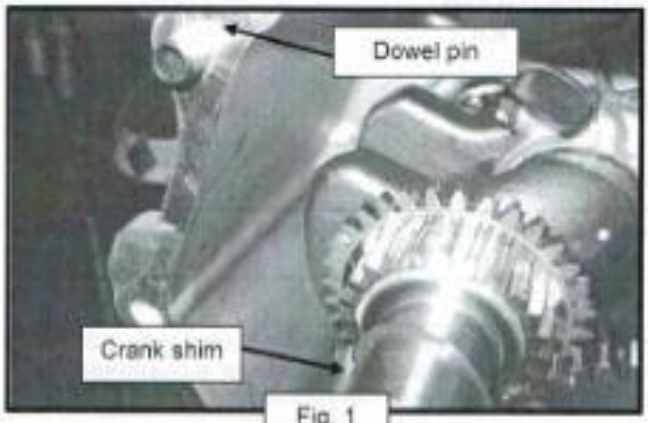


Fig. 1

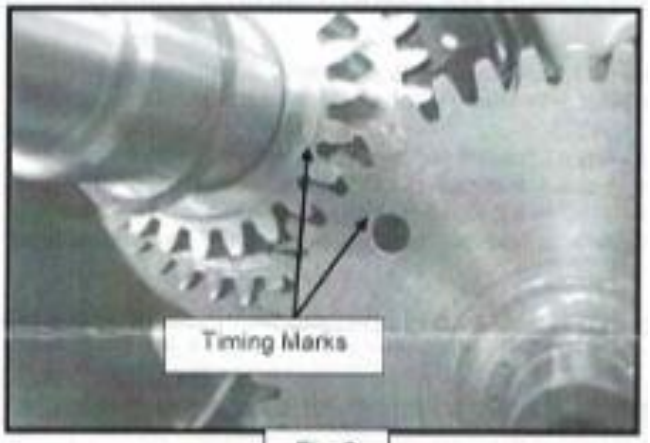


Fig. 2

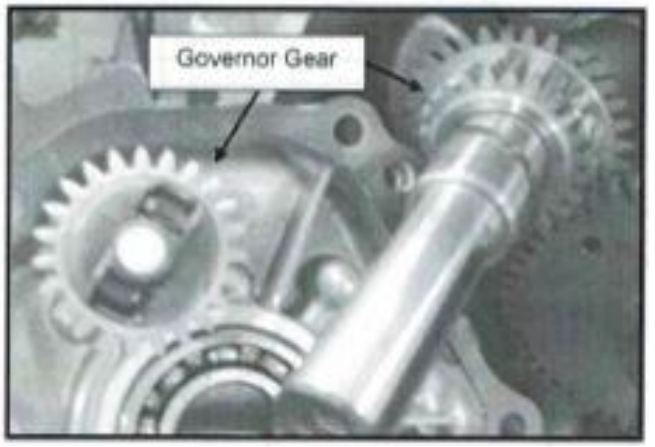


Fig. 3

2. PREPARATION:

- Place the snowmobile on a flat, clean, stable work surface.

NOTE:

You will need to remove the engine from the snowmobile. Please refer to the appropriate service manual:

- 8JM-F8197-E0-00 – Canada
- LIT-12618-03-04 – U.S.A.

- Remove the engine by removing 4 bolts at the base of the engine and 3 bolts on the clutch side of the engine.
- Remove the chain and drive clutch.
- Remove the throttle and choke cables.
- Shut the fuel petcock off and remove the fuel line from the carburetor
- Disconnect the wiring at the front of the engine. Place the wire harness off to the side.
- Remove the valve cover and gasket by removing the four 10mm bolts.
- Loosen the rocker arm jam nuts and remove the push rods.
- Remove the cylinder head and gasket by taking out one 10mm bolt holding the black cylinder air shroud in place and four 12mm bolts on the head.

NOTE:

Be cautious and make sure the dowel pins stay located in the engine block.

- Remove the air box lid and the 10mm bolt from inside the air box that holds it to the engine. Remove the two 10mm nuts holding the air box to the carburetor.
- Leave the carburetor installed on the head, but remove the linkage to the carburetor by twisting the head/carburetor assembly, taking careful note of the linkage location.
- Remove the engine side cover and gasket by taking out six 12mm bolts. Pay close attention to the crankshaft shim and dowel pins located on the cover (Fig. 1).
- Carefully remove the old camshaft from the engine.

NOTE:

Watch for valve tappets that might fall out of the engine block when removing the camshaft. Both tappets are identical, so location when re-installing is not important.

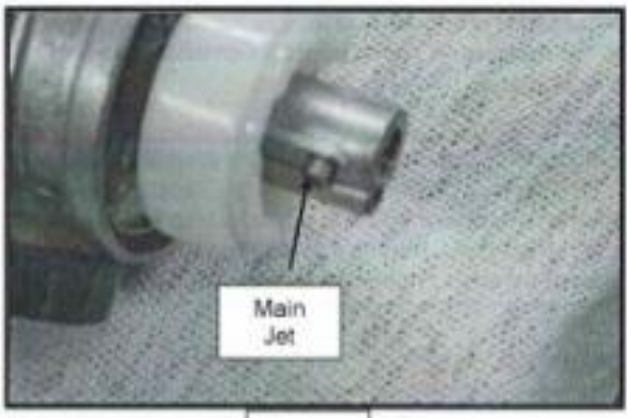


Fig. 4

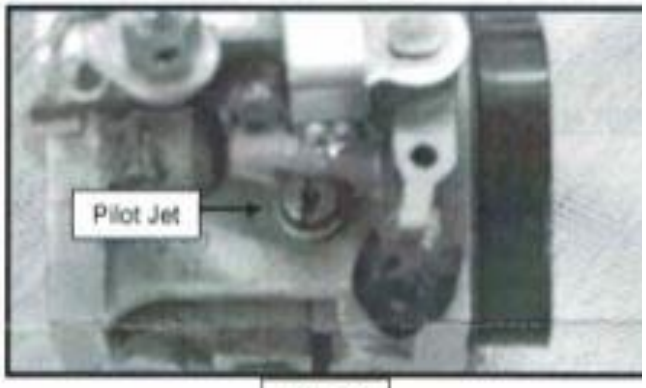


Fig. 5

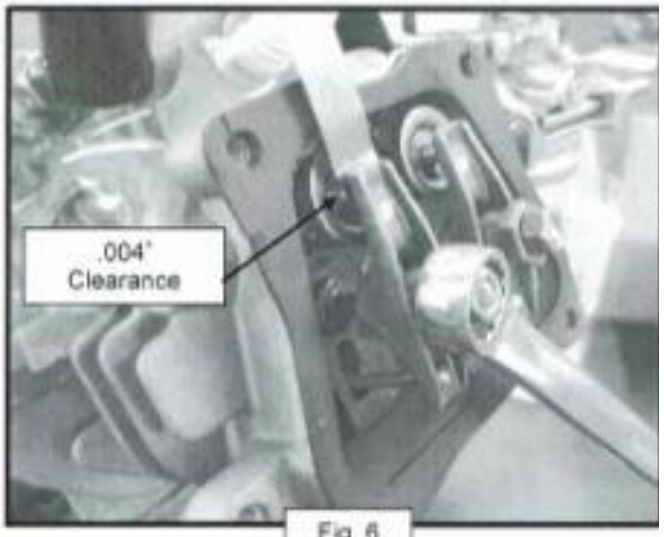


Fig. 6

3. INSTALLATION:

NOTE:
Use Loctite® 242 thread locker on each fastener to prevent loosening during operation.

- Install the new camshaft and align the timing marks (Fig. 2).

NOTE:
Make sure to apply a small amount of oil on camshaft lobes and both ends of camshaft before installing in engine.

- Reinstall the engine side cover using the new gasket. Torque the six 12mm side cover bolts to 17 ft. lbs. (24 N·m)

NOTE:
Make sure the plastic governor gear mates with the teeth on the crankshaft before tightening the cover (Fig. 3).

- Remove the stock valve springs using a spring compressor tool and releasing the valve keepers.

NOTE:
Keepers are very small and are easily lost; please perform this procedure over a clean work area.

- Install the new springs in reverse order.
- Install the new Main Jet Fig. 4) and Pilot Jet (Fig. 5). Take care when installing the jets, do not over tighten.
- Re-install the cylinder head with the new head gasket, installing the carburetor linkage as noted above. Be sure both gasket surfaces are clean and dowel pins are in place before installing the head. Torque the four 12mm bolts to 17 ft. lbs. (24N·m).
- Re-install push rods and place rocker arms back over valves and push rods.
- Rotate the engine to TDC of the compression stroke and set valve clearance on both the intake and exhaust valves to .004" (.10mm) using an appropriate feeler gauge (Fig. 6). Torque to 88 in. lbs. (9.9 N·m).
- Re-install the valve cover.
- Ensure all nuts, bolts and carburetor linkages are tight and in their proper place.
- Fill the engine with 18 oz. of factory recommended oil and re-install the engine.
- Re-connect all cables and electrical connectors.

- Start the engine and let idle for approximately 2 minutes to allow the new camshaft to seat in properly.

NOTE:
Because of the changes made to your engine, you will see different starting and running characteristics. If you have made non-factory gear changes, they may have to be altered for the match the new engine performance.

4. **MAINTENANCE:**
Periodically check all hardware for tightness and re-tighten as required.

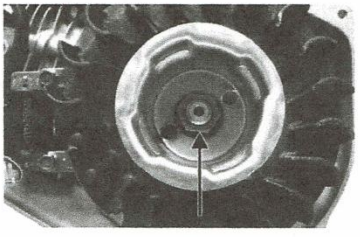
ESTIMATED TIME TO INSTALL: 4.2 HOURS

120 Engine Upgrade Kit (p/n 6639-883)

Offset flywheel key Supplemental Instructions

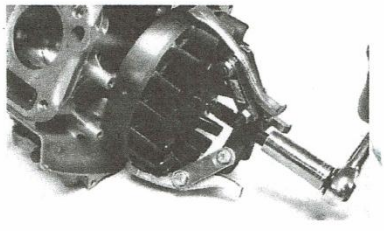
- **NOTE: Read these instructions thoroughly and carefully before beginning the installation process. Retain these instructions for future reference.**

1. Remove four 10mm cap screws holding on recoil shroud.

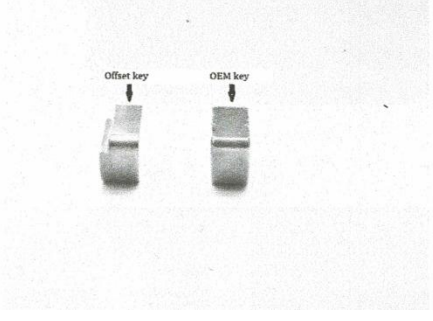


2. Using a 22mm socket remove flywheel nut and recoil cup.

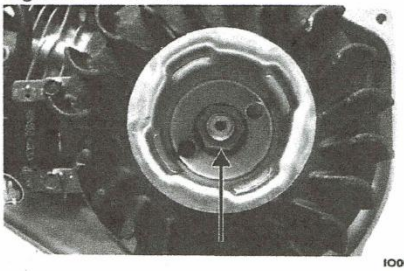
3. Using a flywheel puller, remove flywheel.



4. Remove OEM flywheel key and replace with supplied Offset key as shown.



5. Install flywheel on crankshaft and rotate (clockwise) until flywheel contacts new key. Tighten to 48 ft lbs.



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■NOTE: Before installing the flywheel, make sure the taper of the crankshaft and flywheel are clean.

6. Install recoil shroud, watching to make sure all wires are in the proper location.