

LEVEL

NEXT

PERFORMANCE PRODUCTS

GYR PERFORMANCE HEAD KIT
FOR YAMAHA SNOSCOOT & ARCTIC CAT ZR 200
PART # GYR-E1121-10
(REVISED 2/15/19)
ISR IMPROVED STOCK LEGAL

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.

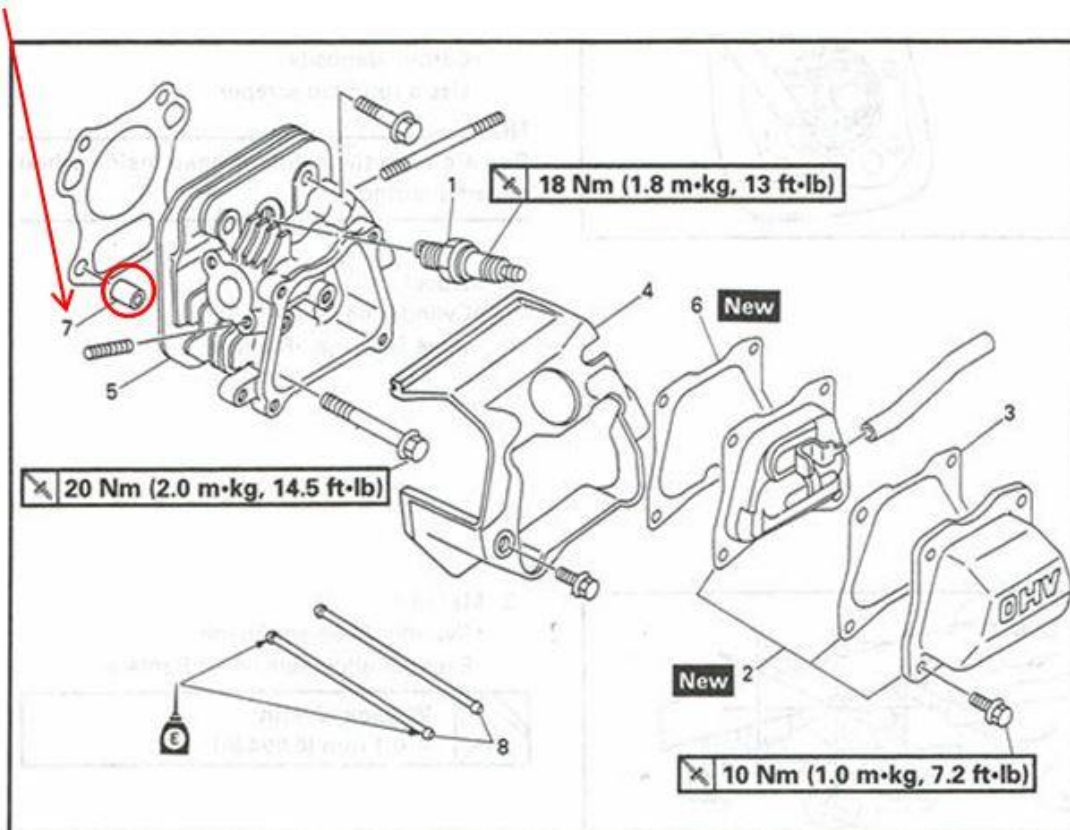
*****PLEASE NOTE*****

This product is intended for closed-course racing only and is sold "as-is" without warranty. 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.

1.) IN ORDER TO REMOVE HEAD PROPERLY YOU WILL NEED TO REMOVE ENGINE FROM SLED.

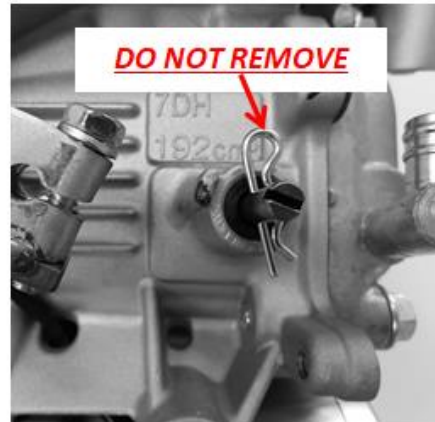
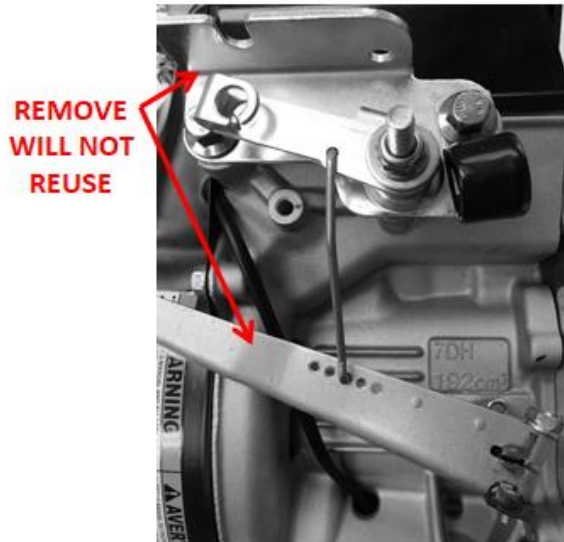
2.) CYLINDER HEAD COVER AND CYLINDER HEAD REMOVAL AS SHOWN BELOW.

*NOTE: MAKE SURE TO KEEP BOTH HEAD LOCATING PINS, THEY WILL BE REUSED.

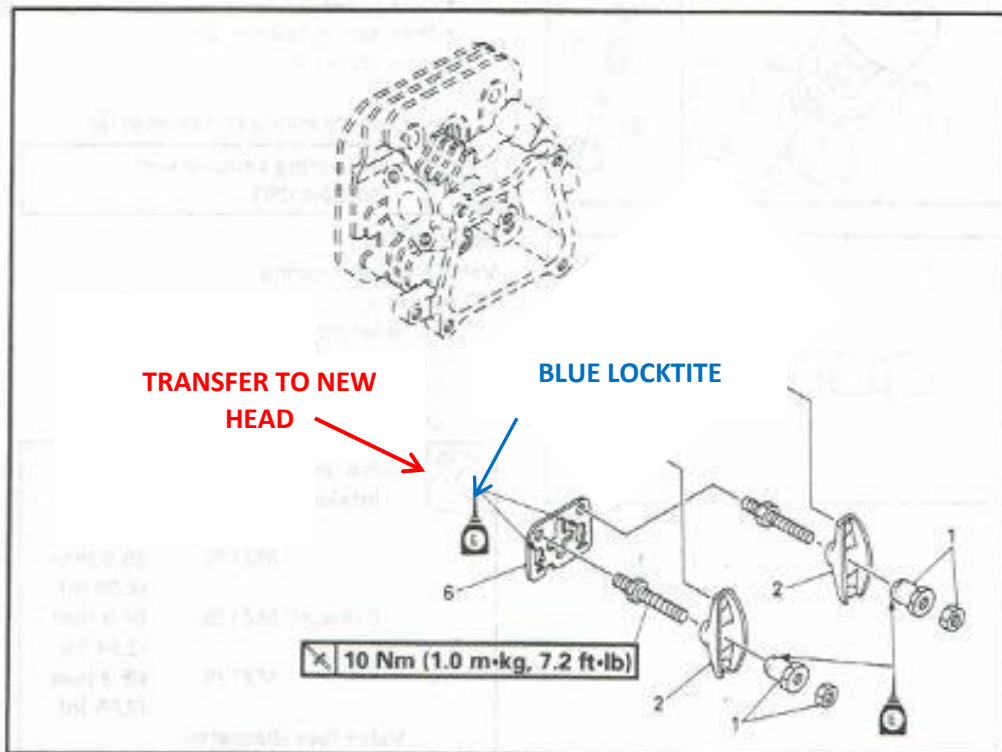


DISREGARD STEP 3 IF YOU ARE ONLY INSTALLING THE HEAD

3.) IF YOU ARE INSTALLING THE NEW CARB WITH KIT THE THROTTLE BRACKET & GOVERNOR ARM WILL NEED TO BE REMOVED BECAUSE IT WILL NO LONGER BE NEEDED. THE THROTTLE CABLE WILL GO DIRECTLY INTO THE NEW CARB.

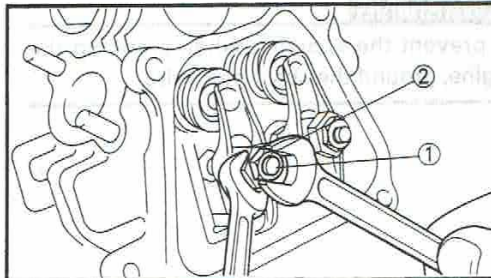
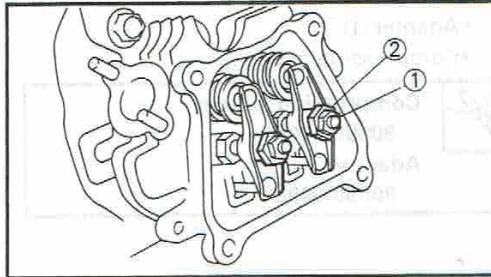
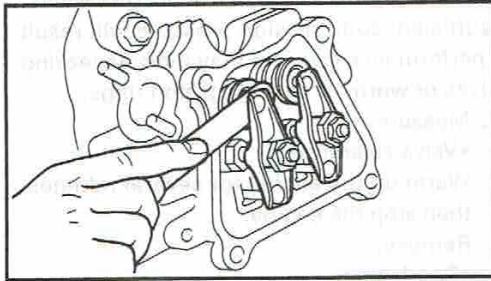
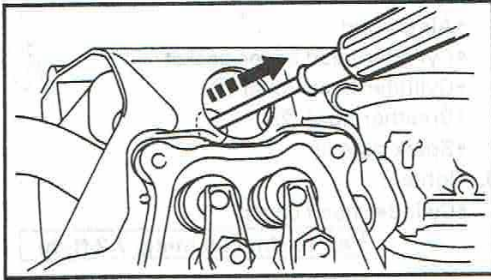


4.) YOU WILL NEED TO REMOVE THE PARTS LISTED BELOW AND TRANSFER TO YOUR NEW HEAD.



5.) INSTALL NEW HEAD ASSEMBLY ON TO ENGINE WITH THE NEW SUPPLIED HEAD GASKET. MAKE SURE HEAD LOCATING PINS ARE IN PLACE. TORQUE HEAD TO 14.5 FT LBS OR 175 IN. LBS.

6.) SET VALVES AS SHOWN.



2. Pull the starter rope until the piston touches the screwdriver, the piston is then at T.D.C.

3. Inspect:
 •Valve clearance
 Out of specification → Adjust.

	Standard valve clearance:
	Intake valve (cold)
	0.05 ~ 0.1 mm (0.002 ~ 0.004 in)
	Exhaust valve (cold)
	0.05 ~ 0.1 mm (0.002 ~ 0.004 in)

	Service gauge (Thickness gauge):
	90890-03079

Valve clearance adjustment

1. Turn the crankshaft until the piston reaches top dead center (T.D.C.).
2. Loosen the locknut ① and insert the 0.1 mm (0.04 in) thickness gauge between the rocker arm and the valve top.
3. Turn the adjuster ② in or out to obtain the proper valve clearance. Move the thickness gauge up and down to check for the proper resistance.

Adjuster	Resistance	Valve clearance
Turn in	Increase	Decrease
Turn out	Decrease	Increase

4. Tighten the locknut ①

10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE:
 Be sure the hold the adjuster ② when tighten the locknut.

**TIGHTENING TORQUE/
GENERAL TORQUE SPECIFICATIONS**



TIGHTENING TORQUE

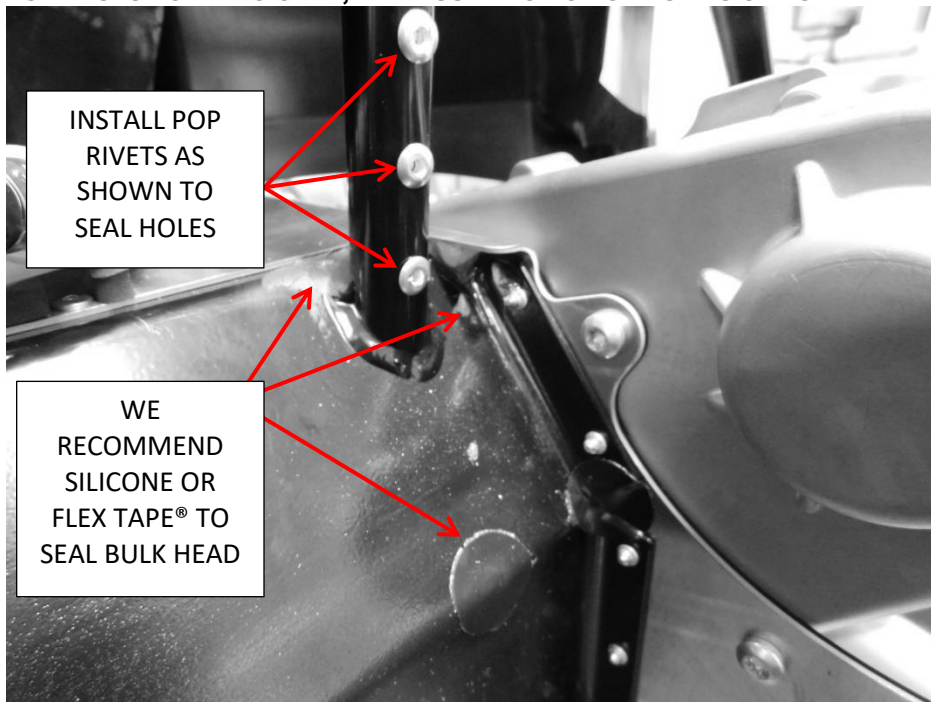
Item	Model	MZ200	
		Thread size	Torque Nm (m-kgf, ft.lbf)
* Cylinder head		M 8 × 1.25	20 (2.0, 14.5)
* Cylinder head cover		M 6 × 1.0	10 (1.0, 7.2)
Crankcase cover		M 8 × 1.25	22 (2.2, 15.9)
Spark plug		M14 × 1.25	20 (2.0, 14.5)
Fan case		M 6 × 1.0	7 (0.7, 5.1)
Connecting rod		M 7 × 1.0	12 (1.2, 8.7)
Flywheel magneto		M14 × 1.5	68 (6.8, 49.2)
Governor arm		M 6 × 1.0	8 (0.8, 5.8)
TCl unit		M 6 × 1.0	10 (1.0, 7.2)
Oil drain plug		M10 × 1.25	17 (1.7, 12.3)
Valve adjuster locknut		M 6 × 0.5	10 (1.0, 7.2)
Engine stop switch		M 6 × 1.0	4.5 (0.45, 3.3)

GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard ISO pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

Tread size	Tightening torque		
	Nm	m-kgf	ft-lbf
M4	2	0.2	1.4
M5	3	0.3	2.2
M6	7	0.7	5.1
M7	10	1.0	7.2
M8	15	1.5	10.8
M10	30	3.0	21.7
M12	60	6.0	43.4

IT IS HIGHLY RECOMMENDED TO SEAL BULK HEAD AREA TO KEEP SNOW OUT OF ENGINE & CARB AREA TO ELIMINATE SNOW INGESTION INTO CARB, MAKE SURE TO DO BOTH SIDES OF BULK HEAD.



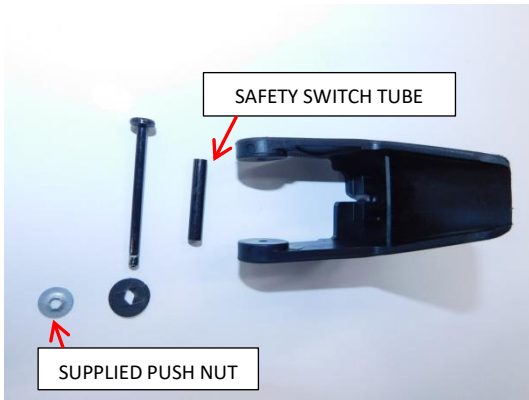
DISREGARD STEP 7 THRU 9 IF YOU ARE ONLY INSTALLING THE HEAD

7.) WHEN INSTALLING CARB INTO MANIFOLD MAKE SURE THAT IT IS PUSHED IN AS FAR AS IT WILL GO BEFORE TIGHTENING CLAMP.

8.) SIDE THE VELOCITY STACK ON TO CARB AND ROTATE TO DESIRED LOCATION. (NOTE USE A SMALL AMOUNT OF SILICONE INSIDE OF VELOCITY STACK MOUNTING AREA TO HOLD STACK ON CARB.)

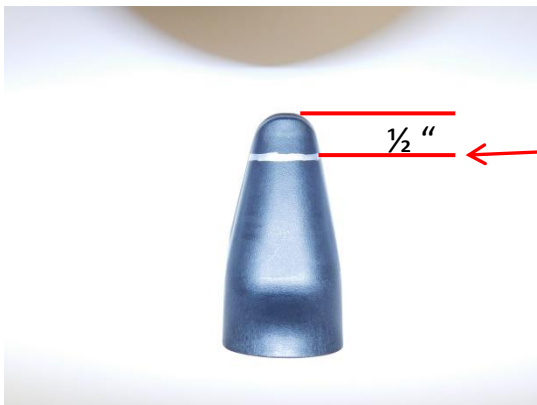
9.) THROTTLE CABLE REPLACEMENT. THE GYR KIT COMES WITH AN INNER CABLE TO REPLACE THE FACTORY INNER THROTTLE CABLE.

BELOW ARE A FEW STEPS & PICTURES THAT WILL HELP MAKE THE REPLACEMENT EASIER.



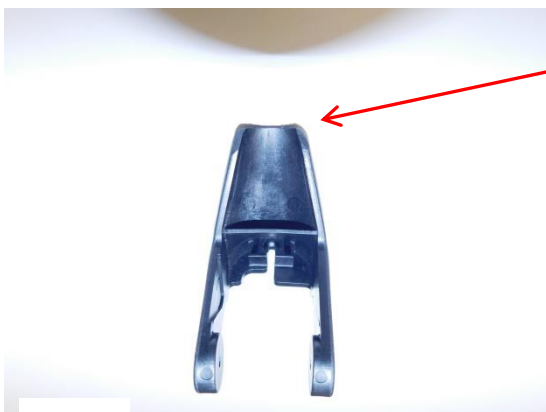
REMOVE THUMB THROTTLE; MAKE SURE TO WATCH THAT THE SAFETY SWITCH TUBE DOES NOT FALL OUT OF THE THROTTLE BRACKET. IF PUSH NUT IS DAMAGED DURING REMOVAL, USE SUPPLIED PUSH NUT.

NOTE: SUPPLIED PUSH NUT WILL BE TAPED TO CARB BAG.

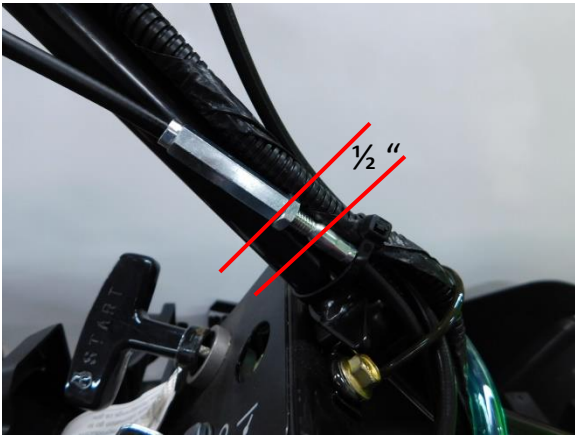


IN ORDER TO GET FULL THROTTLE ON THE NEW CARB YOU WILL NEED TO MODIFY THE THUMB THROTTLE AS SHOWN.

MEASURE BACK 1/2" BACK FROM END AND CUT ON THE LINE.



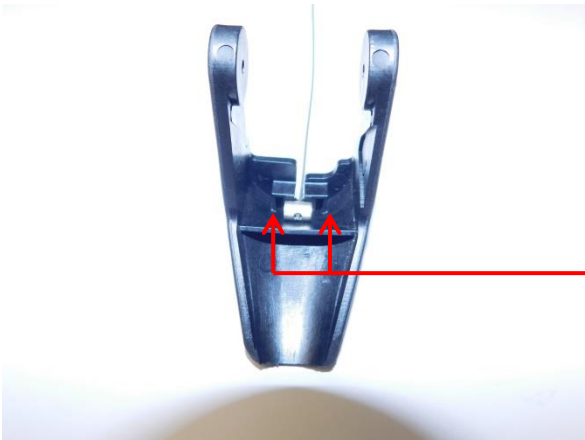
IF DONE CORRECTLY THE THUMB THROTTLE SHOULD LOOK LIKE THIS.



TIP: MEASURE AND CUT INNER CABLE TO APPROXIMATELY 33 1/2" BEFORE INSTALLING CABLE BARREL. THEN SET CABLE ADJUSTER TO 1/2" AS SHOWN. THIS WILL BE VERY CLOSE TO THE CORRECT MEASUREMENT FOR FULL THROTTLE OPENING.

NOTE: 2mm ALLEN WRENCH IS NEEDED FOR CABLE BARREL SET SCREWS.

VERY IMPORTANT TO MAKE SURE TO TEST THROTTLE SAFETY SWITCHES BEFORE DRIVING SLED!



IT IS VERY IMPORTANT TO PUT A SMALL AMOUNT OF SILICONE NEXT TO THE CABLE BARREL TO KEEP THE CABLE FROM COMING OUT OF THE THROTTLE BARREL DURING OPERATION.

SILICONE THESE AREAS AND LET DRY



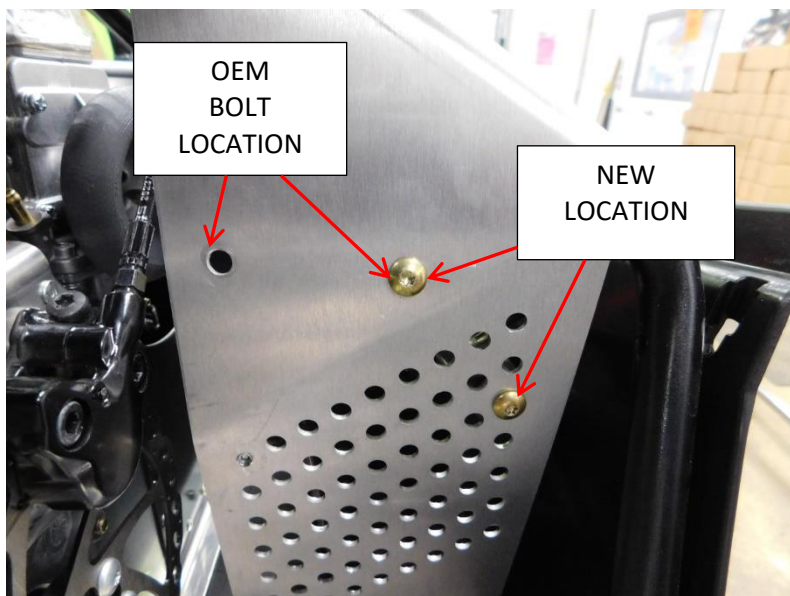
MAKE SURE NUT IS REMOVED FROM THROTTLE CABLE END AS SHOWN.

USE A SMALL AMOUNT OF SILICONE ON THREADS TO HOLD CABLE IN PLACE.

**CONTACT RECREATIONAL MOTORSPORTS
FOR JETTING INQUIRIES
(319) 462-6932**

SERVICE BULLETIN FOR PERFORMANCE HEAD & CARB KIT

PART # GYR-E1121-10 (REVISED 12/19/18)



NOTE: ON THE 2019 ZR 200 & SNOSCOOT YOU WILL WANT TO RELOCATE THE STARTER SOLENOID AS SHOWN

