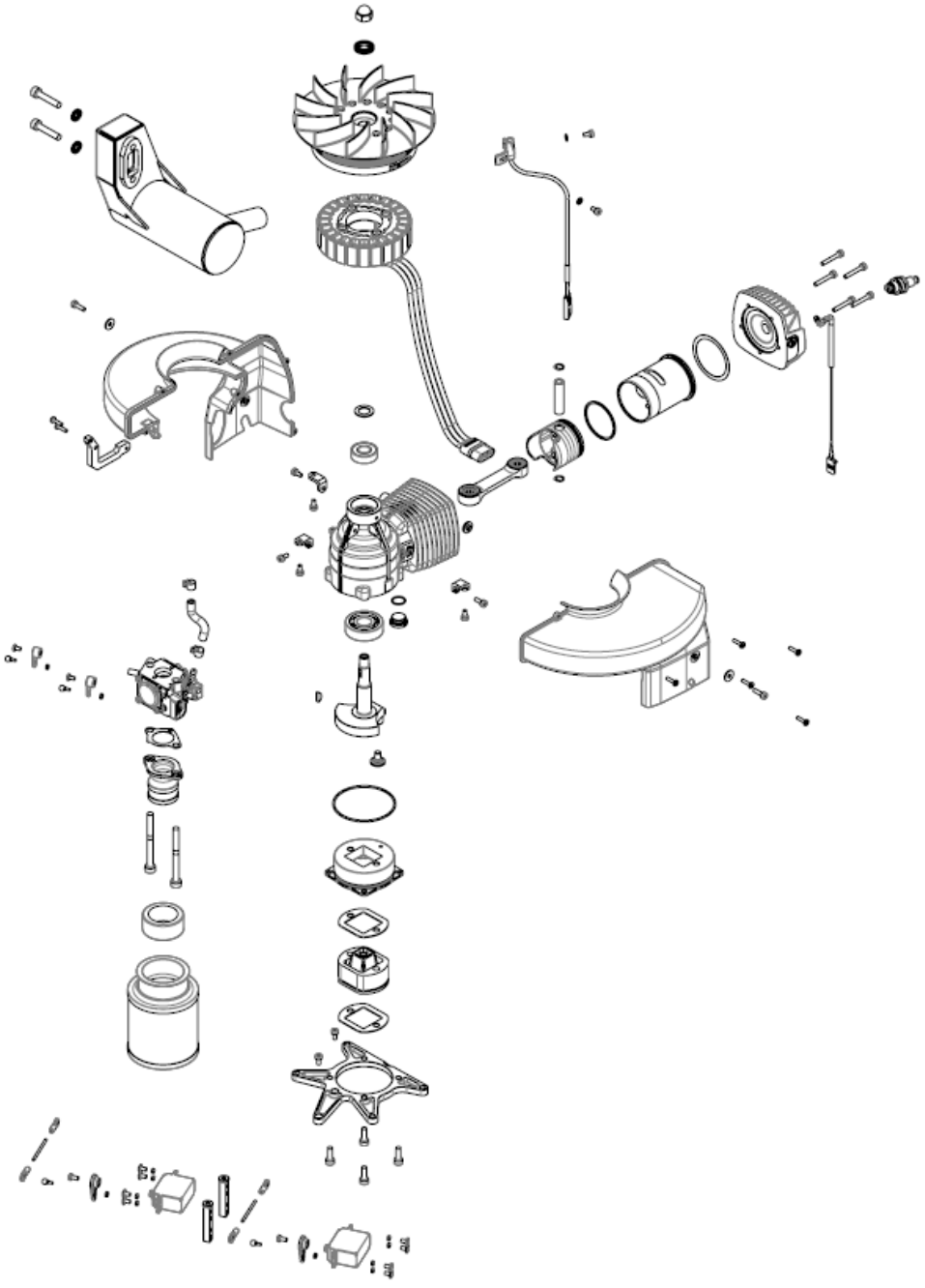
2 stroke gasoline engine for UAV

GT33REU

Maintenance manual

version 1.01
2026.02.16



O.S. ENGINES MFG. CO., LTD.

Content

1.0 Introduction

"GT33REU maintenance manual" explains periodical maintenance, disassembling, adjustment, and re-assembling the product.

Read the following three manuals carefully as well as this manual.
"GT33REU instruction manual"

This manual is based on the latest version of GT33REU.（January,2026）
The specifications are subject to alteration for improvement without notice.
Consult us for any questions on this product and return for repair.

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1.1 NOTIFICATION ON INSPECTION, MAINTENSANCE, AND REPAIR OF THE ENGINE

The following are general instructions and precautions, which need to be followed upon engine inspection, maintenance and repair.

(1) Must use new genuine parts to replace any old ones.
(2) Clean the engine and its peripheral equipment before the work.
(3) Always use the right size tools in correct way. Do not use wrong size tools or tools for different purpose.
(4) Make sure the fuel tank has been removed from the aircraft before disassembling the engine.
(5) Make sure that all the system is turned off or batteries are removed before disassembling the engine otherwise specified.
(6) To avoid assembling wrong parts to the engine, keep the different parts grouped after disassembling.
(7) Keep your own memo to remind you how to re-assemble the engine as it was in case the “Exploded view” does not help you assembling the engine.
(8) Clean the dirt and old oil from the engine parts after disassembling, also remove the liquid gasket which has applied on joint parts.
(9) To avoid corrosion and rust, apply oil to the disassembled parts and store them in a plastic bag.
(10) Replace the O-rings, gaskets, C-clip retainers and stainless steel wire for binding and tie wraps with new ones after disassembling.
(11) Replace the screws and bolts if there are damages on them.
(12) Measure the parts periodically, which have operating limit size with calibrated instruments (calipers, micrometers, dial gauges, etc.).
(13) Since the gasoline or oil could cause damage to the resin parts such as rubber and plastic, make sure there is no any of it adheres to resin parts while working on the engine.
(14) When you remove a part like a cylinder head and a muffler, cover the hole with a plastic sheet not to dust come inside the engine.
(15) Replace the parts according to the criterion of each part to change explained in this manual if there are scratches, deformations, damages and cracks etc.
(16) Use new kerosene or washing oil (Parts cleaner, Brake cleaner etc.) to wash ball bearing taken out of the engine.
(17) When using an air blower to dry the ball bearing after cleaning them, hold the inner and outer races so that they cannot be rotated by the blowing air, or there is a possibility for it to rotate beyond the its limits and cause damage.
(18) Check the rotation of the ball bearing by using your fingers, hold the inner race and turn the outer race to check, or vice versa.
(19) When you remove a ball bearing pressing the steel balls, check and confirm smooth rotation with feeling of fingers. Replace it with new one if it feels rough.
(20) Apply oil to joint surface of the two parts when assembling (no special oil type designated, we recommend 2-cycle oil for gasoline engines.)
(21) When installing a ball bearing, in the case of single side sealed type, install it with the sealed side showing to the outside, in case of open type, with a model name engraved on the outer lace showing to the outside after assembling.
(22) When fixing parts with multiple screws, temporarily tighten all of them first, and make firm by tightening starting from the center area to outer area, next, hotter area to colder area, finally tighten the diagonal screws.

(23) After completing assembly, make sure that all the screws and bolts are tightened up in each process.
(24) There is no basic maintenance process stated in this maintenance manual. For more information, refer to the Federal Aviation Regulation Part 43 (13-1A and 13-2A).
（http://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_43.13-1B_w-chg1.pdf）

1.2 Tightening torque

■Cap screw (Hex. Socket head bolts)

screw size	N・m
M2.6	1.1
M3.0	1.5
M4.0	3.6
M5.0	7.2

※Follow the above tightening torque otherwise specified.

2.0 Periodic inspection chart

Conduct inspection, overhauling, adjustment, and replacing parts according to the following chart. Lifetime of this engine is 500 hours.

No.	Inspection items	Every time before the operation	25 hours	50 hours	100 hours	150 hours	200 hours	250 hours	300 hours	350hours	400hours	450 hours
1	Visual inspection	○										
2	Inspection of the bolts and screws	○										
3	Fuel tubes	○										
4	Compression	○										
5	Wirings, harnesses, connectors	○										
6	Inspection of the spark plug		○	○	●	○	●	○	●	○	●	○
7	Removing carbon build up on the cylinder head				◎		◎		◎		◎	
8	Cylinder liner				◎		◎		◎		◎	
9	Piston				◎		◎		◎		◎	
10	Piston ring				◎		◎		◎		◎	
11	Inspection of piston pin				◎		◎		◎		◎	
12	Piston pin retainer				◎		◎		◎		◎	
13	Inspection of the crankshaft				◎		◎		◎		◎	
14	Inspection of the crankpin stop screw				◎		◎		◎		◎	
15	Connecting rod				◎		◎		◎		◎	
16	Inspection of the front ball bearing				●		●		●		●	
17	Inspection of the rear ball bearing				●		●		●		●	
18	Inspection of generator			○	○	○	○	○	○	○	○	○
19	Inspection of fuel filter		◎	◎	●	◎	●	◎	●	◎	●	◎
20	Carburetor	○	○	○	○	○	○	○	○	○	○	○
21	Inspection of throttle servo	○	○	○	●	○	●	○	●	○	●	○
22	Inspection of temperature sensor		○	○	○	○	○	○	○	○	○	○
23	Inspection of the ignitor		○	○	○	○	○	○	○	○	○	○

○ Inspection
◎ Disassembly · Cleaning · Inspection
● Periodic exchange

2.1 Visual inspection

[every time before the operation]

Check the engine before flight, especially the engine mount, the crankcase, and the silencer to see if there is a crack, fuel leakage, or missing parts.

2.2 Inspection of the bolts and screws

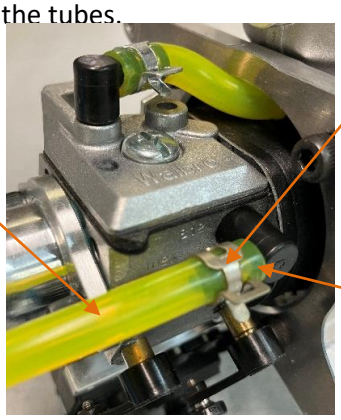
[every time before the operation]

Check the engine before flight, especially the engine mount, the crankcase, and the silencer to see if there is a crack, fuel leakage, or missing parts.

2.3 Fuel tubes

[every time before the operation]

Check if the connection with the fitting (nipple) is secured with a hose clamp,.Check for swelling, hardening, or damage on the tubes.



Check for swelling.
Check for damage.

Check if a hose clamp is installed at the connection between the carburetor nipple and the hose.

Check if the fuel tubes are fully connected to the joint parts.

2.4 Compression

〔every time before the operation〕

With the igniter powered off, turn the crankshaft counter-clockwise facing the propeller. Make sure there is compression.

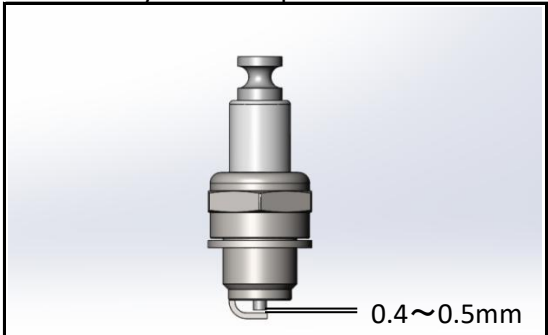
In case there is no compression, inspect the engine according to the inspection points after 100-hour operation.

2.5 Wirings, harnesses, connectors

〔every time before the operation〕

Check for damage (disconnection, wear, deformation, hardening etc.) on wirings, harnesses, and connectors. Replace it if any are damaged.

2.6 Inspection of the spark plug
〔after every 50-hour operation〕



Inspect the spark plug every 50-hour operation and replace it after every 100-hour operation.

Points of inspection

(1) Remove the spark plug with a 14mm deep-socket wrench.

(2.) Check for damage or cracking. Replace the spark plug if any damage or crack.

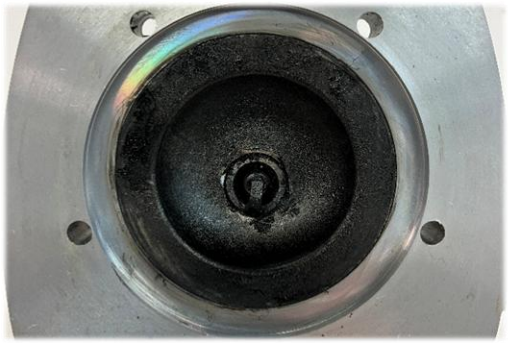
(3) Measure the spark gap. The spark gap of the accessory CM-6 plug is 0.4 – 0.5mm. Adjust the gap within the range.

(4) Clean the center electrode and the ground electrode with a wire brush.

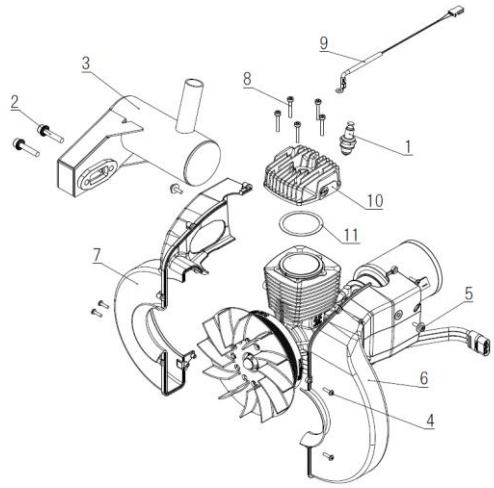
(5.)Install the spark plug in the engine.
Tightening torque: 12N·m

2.7 Removing carbon buildup on the cylinder head

〔after every 100-hour operation〕



Remove the carbon build up from the combustion chamber.



How to detach the cylinder head

(1) Unscrew the spark plug【1】with the engine mounted on the engine mount.

Unscrew the 2 pieces of M5 bolts【2】.

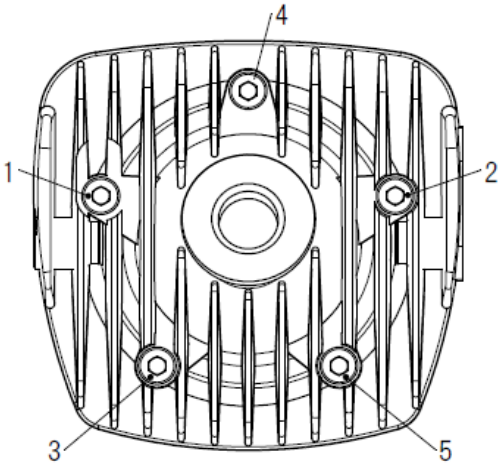
Detach the silencer【3】.

Unscrew 8 pieces of M2.6 tapping screws【4】.

Unscrew 2 pieces of M3 bolts【5】and remove together with the washers.

【main points of disassembling/assembling】

Cylinder head fixing bolts



Lightly screw the 5 bolts evenly. Then tighten the screws one by one in numerical order as shown above to the standard torque for M3 bolts

Detach the fan shroud L【6】

Detach the fan shroud R【7】

Unscrew the 5 pieces of M3 bolts【8】.

Detach the temperature sensor【9】.

Detach the cylinder head【10】.

Detach the gasket【11】.

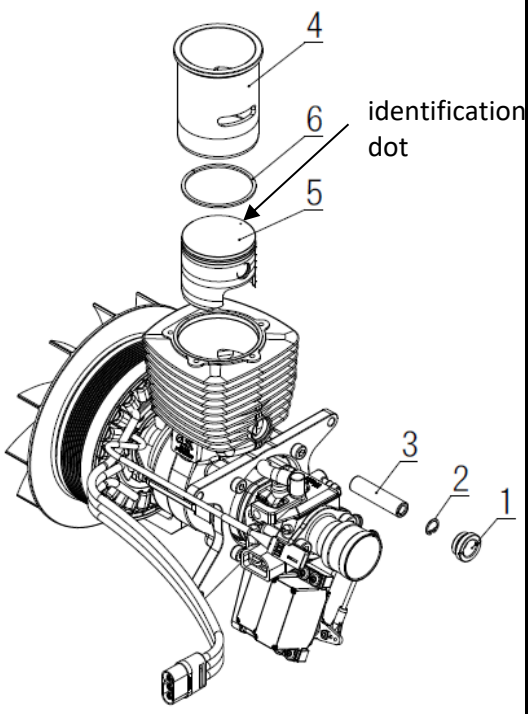
※Do the same procedure in reverse order when you are assembling the cylinder head.

※Refer to the picture on the left when you fit the cylinder head to the engine.

2.8 Inspection of the piston, piston pin and connecting rod and removal of sludge.

[after every 100-hour operation]

Detach the piston and remove the carbon buildup on it.



How to detach the cylinder and piston

Refer to p.7 "How to detach the cylinder head" to remove the cylinder head.

Detach the crankcase plug【1】.

Detach the piston pin retainer【2】.

Pull out the piston pin toward the rear of the engine【3】 using an M5 bolt.

Detach the cylinder liner【4】. The piston and piston ring will come off at the same time.

Detach the piston【5】from the cylinder liner【4】.

Detach the piston ring 【6】 from piston【5】.

※Do the same procedure in reverse order when you are assembling the cylinder and piston

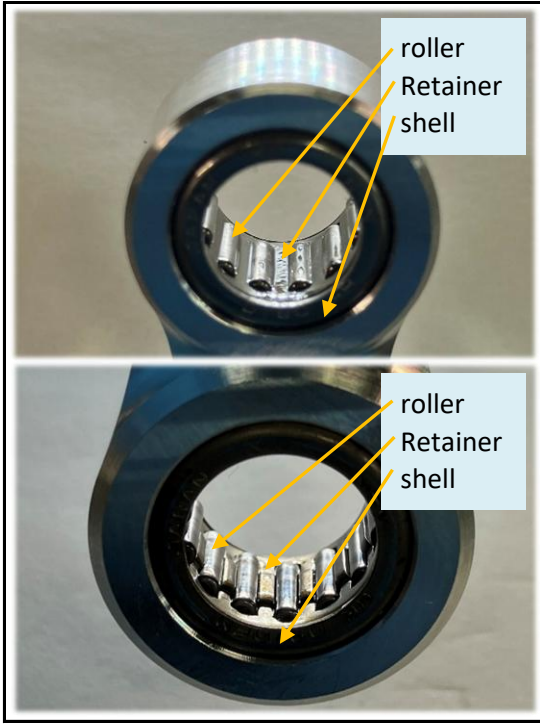
※ There is an identification dot on the top of the piston, which indicates the exhaust port side.

※ When detaching the piston ring, do not expand more than necessary to avoid deformation it.

Main points of inspection

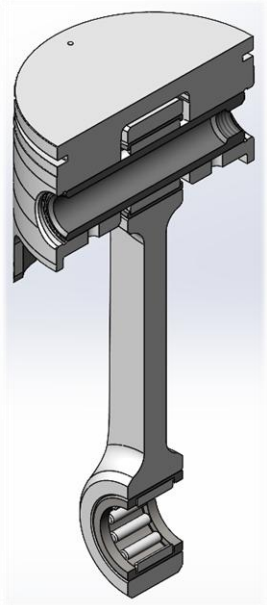
Inspect the piston pin for any burn mark, scratch or any kind of damage.

If found, replace the piston and connecting rod.



Inspection of connecting rod

Check the connecting rod bearing for any damage to the rollers, retainer, or shell. In case there is **some** damage , replace the connecting rod.

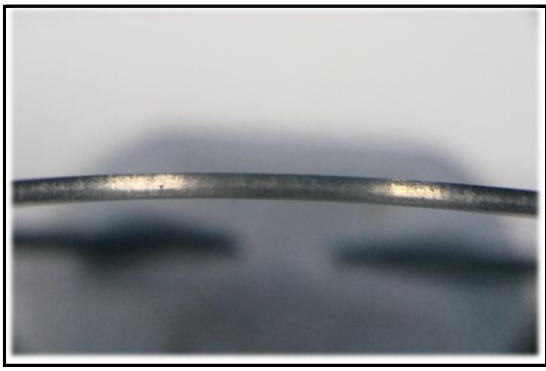


How to check bearing clearance

Check the clearance of the piston pin boss, piston pin diameter, connecting rod small end. In case the clearance is out of acceptable range, replace one of them or both of them.

The clearance of piston pin and boss

Standard clearance	limit clearance
ϕ0.005～ϕ0.015mm	ϕ0.030mm



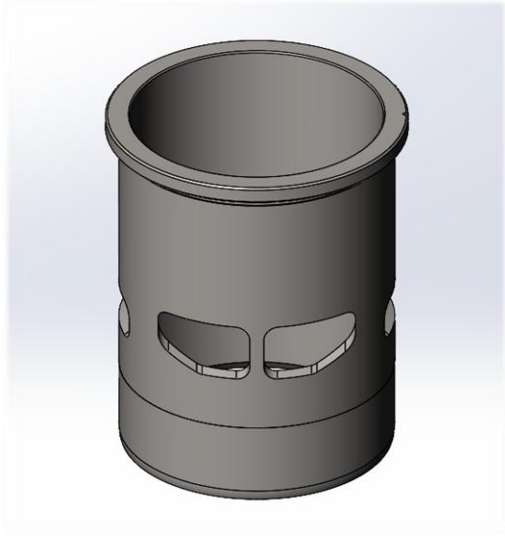
Inspection of Piston ring

Inspect the piston ring. If the surface is coarse, or damaged, replace the piston ring as necessary.

If the piston ring is barrel face type, so there is a mark in center of the face as shown in the picture.

2.9 Inspection of the cylinder

[after every 100-hour operation]



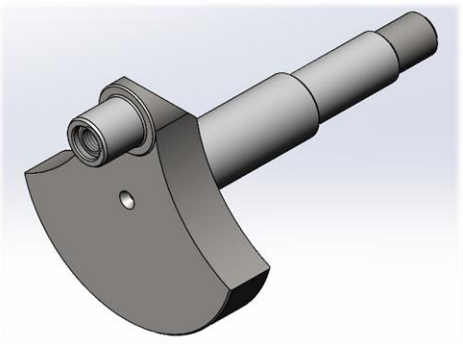
Detach the cylinder after every 100-hour operation and inspect it.

Main points of inspection

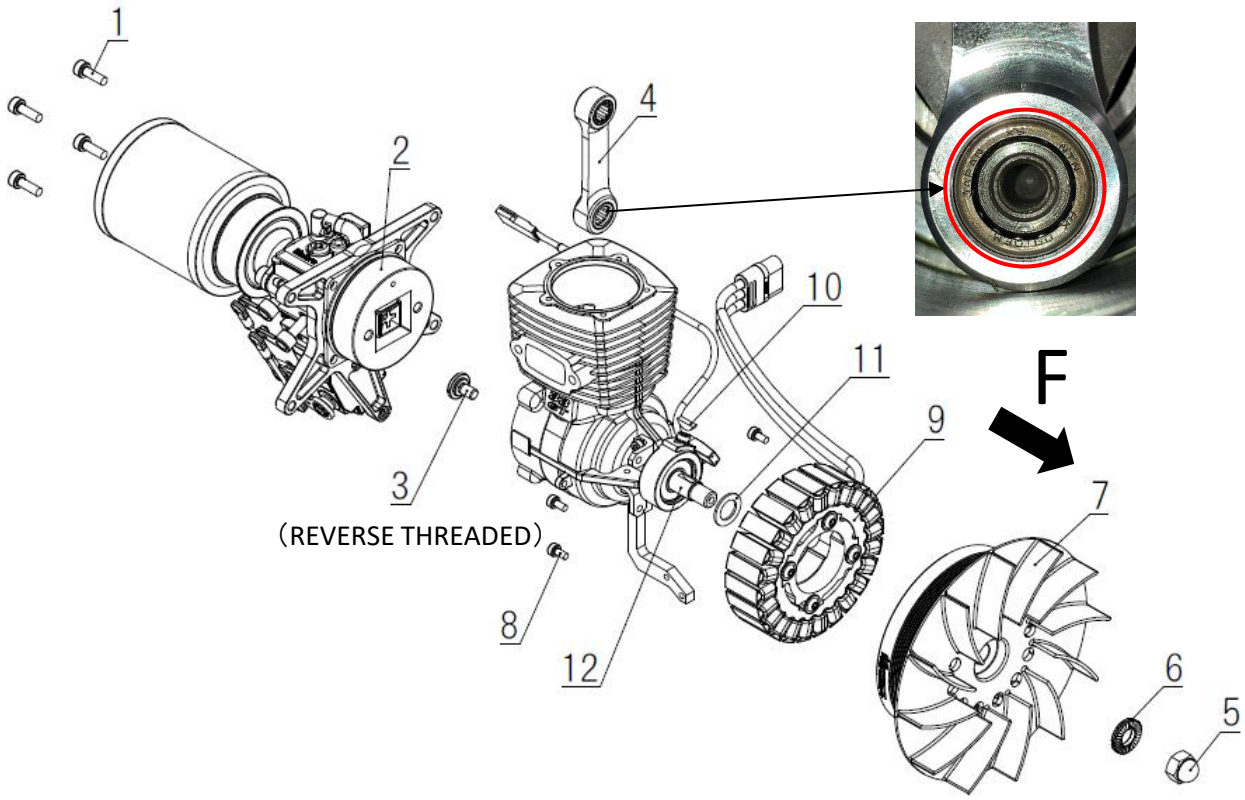
(1) Check the cylinder for peeled plating, scuffing on the surface. Replace the cylinder if it is damaged.

2.10 Inspection of the crankshaft

〔after every 100-hour operation〕



Detach the crankshaft from the engine and inspect it.



How to detach the crankshaft

Refer to the concerned page to remove the cylinder head,(p.7) cylinder and piston(p.8).

Unscrew 4 pcs of M4 bolts【1】.

Detach the cover plate, radial mount, carburetor, throttle servo, and all related components【2】.

Unscrew the crankpin stop screw,which is REVERSE THREADED【3】

Detach the connecting rod【4】.

Detach the 5/16 flange nuts【5】.

Detach the M8 Nord-Lock washers【6】.

Detach the rotor【7】.

Unscrew 3pcs of M3 bolts【8】.

Detach the stator【9】.

Detach the woodruff key【10】.

Detach the thrust washer【11】.

Pull out the crankshaft【12】toward the rear of the engine.

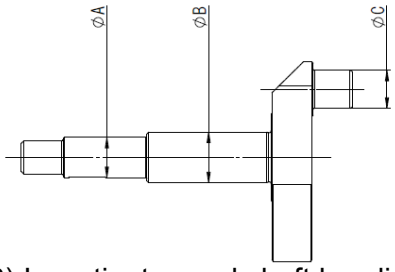
※Do the same procedure in reverse order when you are assembling.
※The crank pin set screw【3】is left-hand thread.
※For the connecting rod【4】, the bearing-marked side faces the rear of the engine.
※For removal of the rotor 【7】, please refer to the next page.

【Torque】
Crank pin set screw【3】: 0.8 N·m
5/16 flange nut【5】: 30 N·m

Main points of inspection

(1.) Inspect the crankshaft visually

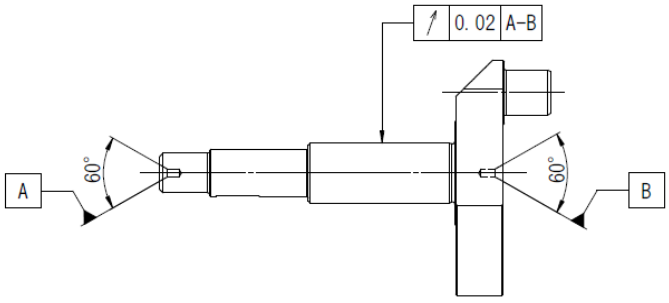
・Check for the damage on the threaded part.
・Check for the wear on the crankshaft where the front ball bearing inner race contacts.
・Check for the wear on the crankshaft where the rear ball bearing inner race contacts.
・Check for the wear and damage on the crank pin
If any damage, replace the crankshaft.

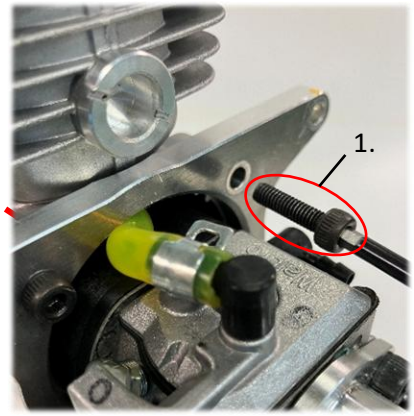


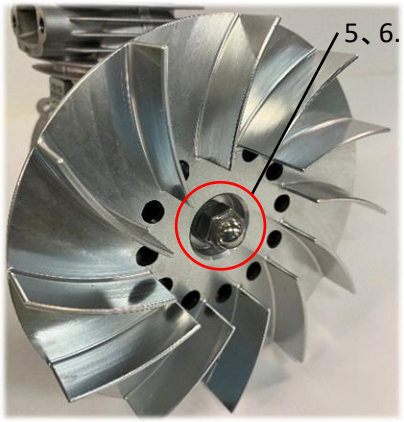
(2) Measure A, B, C in the drawing. Replace the crankshaft in case the measured size is out of the acceptable range.

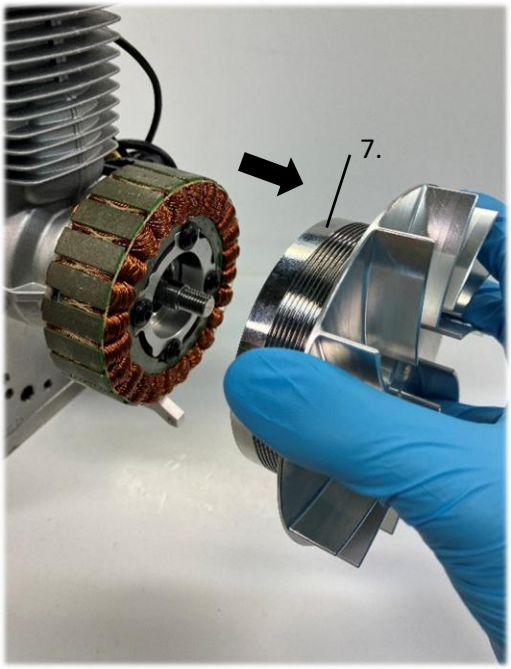
	Standard size	limit size
A ・・・	φ9.521～φ9.526	φ9.520
B ・・・	φ12.003～φ12.008	φ12.000
C ・・・	φ9.022～φ9.027	φ9.020

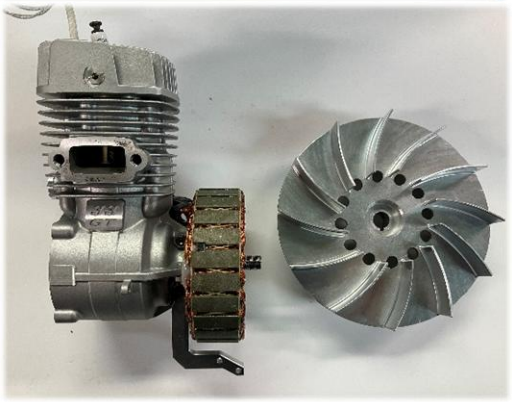
(3) Investigate crankshaft bending. Use a bench center holding the crankshaft at both ends shown in the picture with centers whose angle is 60 degrees. The value should be smaller than 0.02mm at the point shown in the drawing. In case the value is more than 0.02mm, replace the crankshaft.











How to remove the rotor

Remove the four M4 bolts【1】.

Remove the cover plate, radial mount, carburetor, throttle servo assembly【2】.

Secure the crankshaft in the direction of rotation indicated by the arrow.
Remove the 5/16 cap nut【5】.

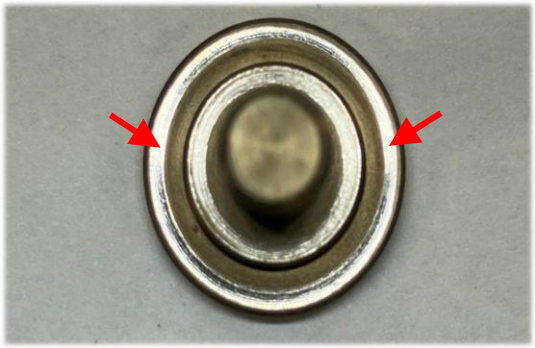
Remove the M8 Nord-Lock washer【6】.

Remove the rotor【7】.

※ Do the same procedure in reverse order when you are assembling.
※ Use a resin material to secure the crankshaft to prevent damage to internal components.
※ The rotor【7】has strong magnetic force, so take care not to pinch your fingers during installation or removal.

2.11 Inspection of the crankpin stop screw

〔after every 100-hour operation〕



back side of the crankpin stop screw

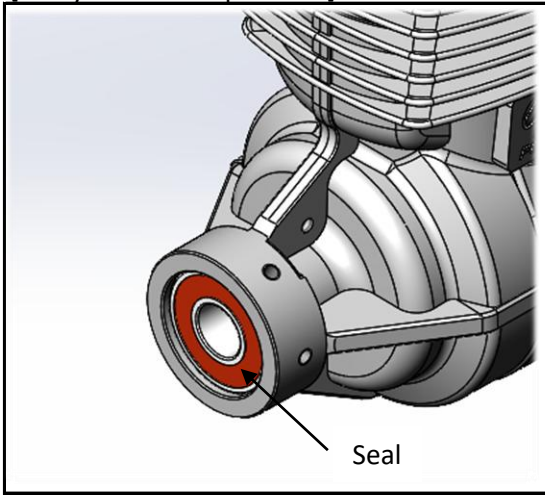
To be inspected every 100-hour operation when you disassemble the engine. Please be careful. This screw is reverse-threaded, so loosen it in the opposite direction.

Points of inspections

Inspect the crankpin stop screw visually to see if there is wear, overheating, or coarse surface on the points shown in the picture. Replace the crankpin stop screw if any damage. Replace the connecting rod in case it has considerable wear unable to recognize the model name of the needle bearing engraved on the outer race.

2.12 Inspection of the front ball bearing

[every 100-hour operation]



Inspect it every 100-hour and replace it every 100-hour operation.

Points of inspections

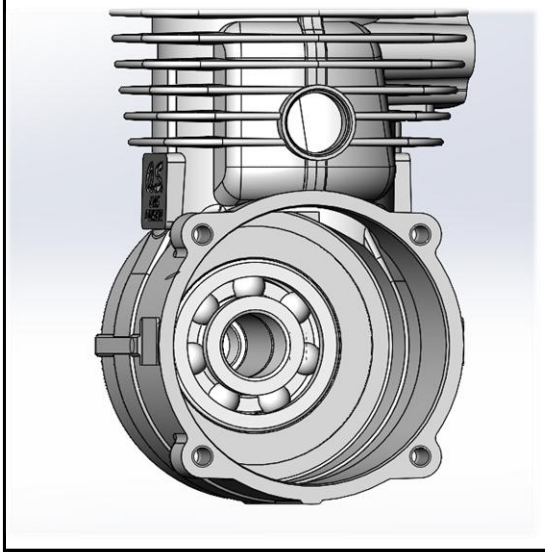
Check if there is oil leakage from the oil seal. Also check if it rotates smoothly.

※ Replace the ball bearing if oil spattered around or if it does not rotate smoothly.

※You will find how to replace a ball bearing in the next page.

2.13 Inspection of the rear ball bearing

[every 100-hour operation]



Inspect it every 100-hour and replace it every 100-hour operation.

Points of inspections

Before inspection, remove the rotation sensor and generator mount from the crankcase, and wash the ball bearings (R) with staying it in the crankcase.

Check the balls, outer race, inner race, and retainer for any significant damage or scratches. Also check if it rotates smoothly. In case it rotates roughly, replace it.

※You will find how to replace a ball bearing in the next page.

【How to remove ball bearings】

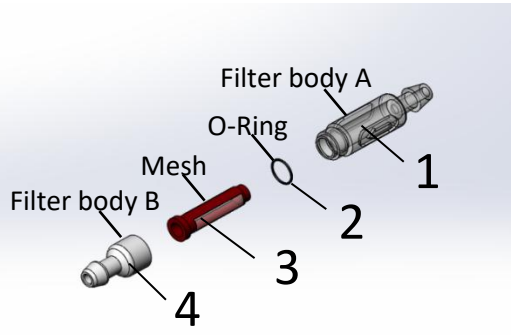
Warm up the crankcase with a hot air gun or some other methods and remove the ball bearing from the crankcase.
*Wear safety industrial gloves in this process to protect your hands.
(1) Wash the crankcase with kerosene or washing oil (Parts cleaner, Brake cleaner etc.) .
(2) Warm up the crankcase up to 150 degrees Celsius.
(3) Hit the crankcase to a piece of wood as shown in the picture. The rear ball bearing will come off after a few hits.
(4) To remove the front ball bearing, use a drift punch or flat-ended dowel of larger diameter than the inner ring and tap with a hammer from behind when the crankcase is still hot.

【How to install ball bearings】

Warm up the crankcase and install a new bearing when the crankcase is still hot.
*Wear safety industrial gloves in this process to protect your hands.
(1) Warm up the crankcase up to 150 degrees Celsius.
(2) Apply penetrating oil to the housing of the both ball bearings.
(3) Fit a rear ball bearing onto the crankshaft facing its model number engraving side to the inner side of the counter weight of crankshaft so that you can see the model number of the rear ball bearing when you remove the crankshaft in the future.
(4) Drop the rear ball bearing guided by the crankshaft into the rear housing. Weight of the crankshaft itself will press the rear ball bearing in the housing.
(5) Press a front ball bearing in the front housing guided by the crankshaft as in the picture.
*Make sure the both bearings are fully and evenly seated in the housings. That is crucial.

2.14 Inspection of fuel filter, disassembling and cleaning

[every 50-hour operation]



Disassemble, inspect, and clean the fuel filter every 50 hour-operation.

How to check [every 50-hour operation]

(1) Filter body A is transparent to check for the dust in the filter. Wash the filter following the processes below.

CAUTION：
Parts cleaner and kerosene are highly flammable. Carry out washing the fuel filter only outdoors or in well ventilated area away from any source of fire.

How to clean a fuel filter

Disconnect the fuel filter from the fuel tubes. Place a towel under the filter to catch and absorb remaining fuel that will run out of the tubes when they are disconnected.

Remove Filter Body B【4】from Filter Body A【1】.

Remove Mesh【3】from Filter Body A【1】.

Remove O-Ring【2】from Filter Body A【1】.

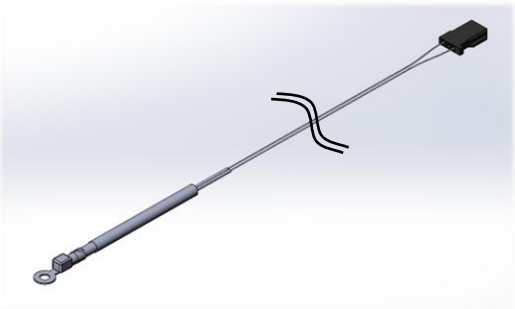
Clean any contaminants from Fuel Filter Body A【1】, Fuel Filter Body B【4】, and Mesh【3】.

Check Filter body A【1】、Filter body B【4】、Mesh【3】、O-Ring【2】with a magnifier. If there is some damage, crack, wear, or deformation, replace it.

Do not damage the o-ring when installing. The tightening torque of filter A to filter B is 0.8N·m.

2.15 Inspection of temperature sensor

〔initial 25-hour operaion〕〔every 50-hour operation〕



Inspect the temperature sensor after the initial 25-hour operation, and thereafter every 50-hour operation .

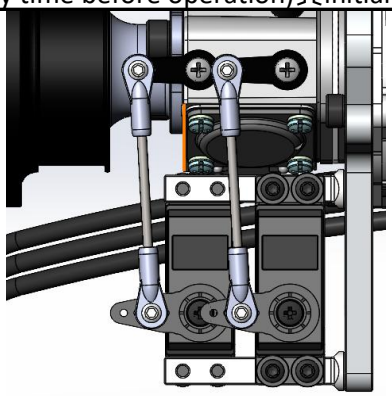
How to check [every 50-hour operation]

Measure electric resistance between two pins in the connector if the temperature sensor is used as a single unit. If measured value is 55kΩ±5% in room temperature, it is working correctly .Replace it if the value shows abnormal value.

※The temperature sensor is thermistor .

2.16 Inspection of throttle servo

〔every time before operation)〕〔initial 25-hour operation〕〔every 50-hour operation〕



Check the throttle servo every time before operation, initial 25-hour operation and every 50-hour operation.

How to check [every time before operation]

(1) Check the throttle servo. Replace it if there is damage or crack on the case, flange, and lead wire.

(2) Tighten the pivot ball screw on the throttle link rod if it is loose.

(3) Check the throttle link rod. Replace it if there is backlash.

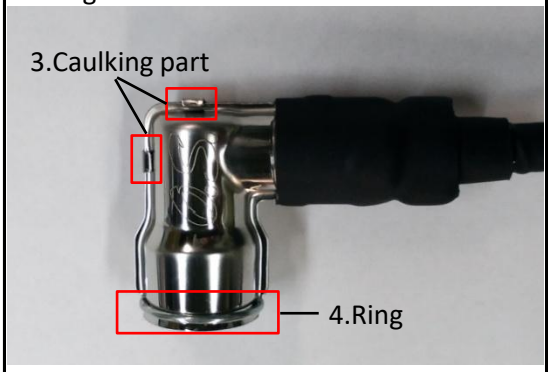
(4) Check if the throttle servo moves smoothly according to signals from a receiver , if the servo holds its position when throttle signal input says stop. Replace the servo if it chatters, or does not hold its position.

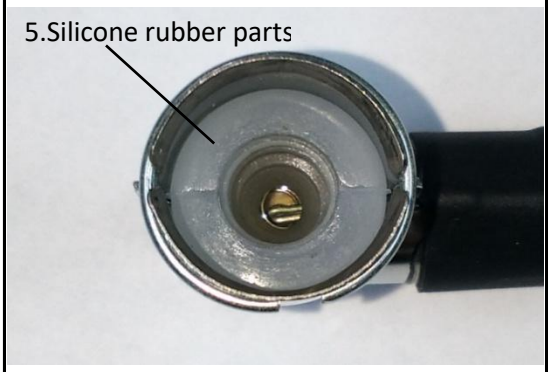
※Please perform the inspection for the choke servo as well.

2.17 Inspection of the ignitor

[after every 50-hour operation]

2.High tension cord





Inspect the ignitor every 50-hour operation.

Inspection procedures [every 50-hour operation]

(1) Remove the plug cap from the spark plug holding the plug cap body firmly. Pull the plug cap with a twist when it is firmly fixed to the spark plug. Do not pull the high tension cord. Do not use a screw driver to remove the plug cap from the spark plug. It may ruin the plug cap.

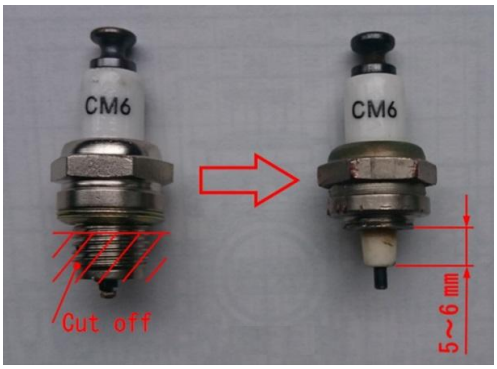
(2) Check for tear and worn on the surface of the high-tension cord. In case outer metal mesh is worn more than 1/2 of its thickness, replace the whole ignition system. The high-tension cord cannot be replaced itself alone. In case it is worn less than 1/2, use a spiral cord protector. In case string of the outer metal mesh is cut considerably, more than 5 strings per 10mm cord length, replace the ignition system. If less, reinforce the cord with a spiral cord protector.

(3) Check if the caulking parts come off. Make sure to caulk the parts firmly.

(4) Check if the ring is placed at the right position. If the ring is damaged or lost, replace it. (code No. 74002200 PLUG CAP SET)

(5) Check for damage of the silicon part in the plug cap. In case of damage, replace it. (code No. 74002200 PLUG CAP SET)

(6) Generally, spark ignition is more difficult in a combustion chamber of an engine, where fuel mixture is compressed, than under atmospheric pressure. The discharge distance (the spark plug gap) is 0.4 – 0.5mm in the engine, which is equivalent to the discharge distance of 5-6mm under atmospheric pressure. So make a spark plug for spark check under atmospheric pressure as shown below, whose discharge distance is more than 5mm. Make a spark check away from inflammable such as gasoline.To ignite the special-made plug, connect the crankshaft rotation sensor directly to the ignition signal connector of the ignition module (IG-08), and pass the magnet of the drive washer under the crankshaft rotation sensor swiftly to get the spark plug to spark. Change the connection as it was.



How to make a special spark plug for spark check

(1) Prepare CM-6 spark plug. It doesn't have to be a new one but a used one.

(2) Cut off a part of the spark plug body as shown in the picture.

Engine parts list

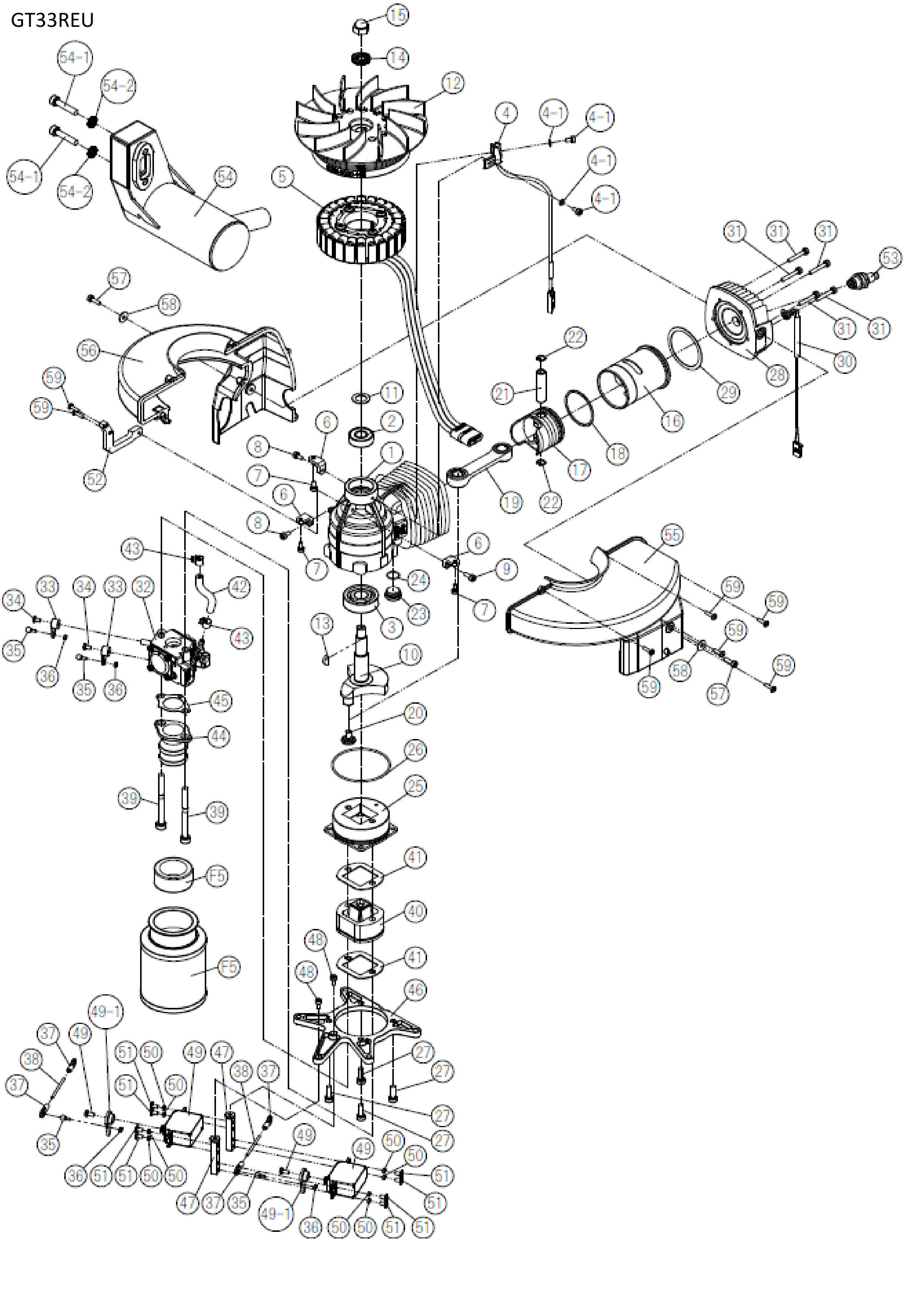
■ENGINE PARTS LIST / GT33REU (1/3)

No.	Code No.	Description	
1	4AP01000	CRANKCASE GT33REU	
2	26731010	BALL BEARING (F) 120AX	
3	4AH30000	BALL BEARING (R) GT33REU	
4	74002A20	ROTATION SENSOR IG-10	
4-1	74002321	ROTATION SENSOR FIXING SCREW GT33.22.60	Tightening torque 0.4N・m
5	54076011	STATOR ASSEMBLY SGM-9020-135	
6	4AH50040	STATOR STAY GT33U2	
7	79871109	HEXAGON HEAD SCREW M3.0X 6 (10PCS/SET)	Tightening torque 1.5N・m LOCTITE243
8	79871110	HEXAGON HEAD SCREW M3.0X 8(10PCS/SET)	Tightening torque 1.5N・m
9	79871140	HEXAGON HEAD SCREW M3.0X12(10PCS/SET)	Tightening torque 1.5N・m
10	4AP02000	CRANKSHAFT GT33REU	
11	46120000	THRUST WASHER 46AX.91FX.SXH.SZ.FT160.FF	
12	54076020	ROTOR ASSEMBLY SGM-9020-135	
13	29008219	WOODRUFF KEY 61.90.91	
14	55500007	NORD LOCK WASHER M8 (10PCS.)	
15	4AP10000	BOX NUT 5/16	Tightening torque 30N・m
16	28303100	CYLINDER LINER GT33	
17	28303210	PISTON GT33	
18	28303400	PISTON RING GT33	
19	28305000	CONNECTING ROD GT33	
20	28302100	CRANK PIN STOP SCREW GT33	Tightening torque 1.5N・m Reverse screw
21	4A006000	PISTON PIN GF30	
22	28317000	PISTON PIN RETAINER GT33.GT22.GF30	
23	29701300	CRANKCASE PLUG GT55.33.22.GF30	Tightening torque 1.2N・m
24	29701310	O-RING (SS-10.5)	
25	4AP07000	COVER PLATE GT33REU	
26	29122540	SILENCER GASKET (O-RING) E-5020	
27	79871415	HEXAGON HEAD SCREW M4.0X15(10PCS/SET)	Tightening torque 3.6N・m
28	4AP04000	CYLINDER HEAD GT33REU	
29	28304160	HEAD GASKET (0.4T) GT33	
30	54065000	ST-01 TEMP. SENSOR FOR EM-100	
31	79871200	HEXAGON HEAD SCREW M3.0X20(10PCS/SET)	Tightening torque 1.7N・m
32	28381000	CARBURETTOR COMPLETE (WT1024) GT33	
33	22081408	THROTTLE LEVER (NO.5)	
34	29781350	WLA-2 SCREW 96-156	Tightening torque 0.8N・m
35	4AA07060	LINKAGE BALL M2X4 5X9 (10PCS/SET)	Tightening torque 0.15N・m
36	79850020	NUT 2.0 X 0.40 (10PCS/SET)	Tightening torque 0.15N・m LOCTITE243
37	4AA07310	BALL LINK 5.0 (5PCS/SET)	
38	4AP07010	LINK ROD 1.96XL35	
39	79871560	HEXAGON HEAD SCREW M5.0X60(10PCS/SET)	Tightening torque 3.6N・m
40	28316000	REED VALVE ASSEMBLY GT33	
41	28315000	CARBURETTOR & REED VALVE GASKET GT33	
42	28382500	GASOLINE FUEL TUBE YELLOW M	
43	70000001	HOSE CLIP 6 (5PCS/SET)	
44	4AP50000	AIR CLEANER ADAPTOR GT33REU	
45	29781500	CARBURETTOR GASKET GT55	
46	4AP51000	RADIAL MOUNT GT33REU	
47	4AP52000	SERVO MOUNT GT33REU	
48	79871109	HEXAGON HEAD SCREW M3.0X 6 (10PCS/SET)	Tightening torque 1.2N・m
49	4AP81201	THROTTLE SERVO BLA1HD21	
49-1	4AP81210	THROTTLE SERVO HORN BLA1HD21	

■ENGINE PARTS LIST / GT33REU (2/3)

No.	Code No.	Description	
50	4AG80600	SERVO COLLAR 3X4X1.6 (10PCS/SET)	
51	79871730	BUTTON HEX. HEAD SCREW M3.0X6 (10 PCS)	Tightening torque 0.8N・m LOCTITE243
53	71669000	SPARK PLUG CM-6(NGK)	Tightening torque 12.0N・m
54	28325002	SILENCER E-5033 (GT33REU)	
54-1	79871525	HEXAGON HEAD SCREW M5.0X25(10PCS/SET)	Tightening torque 7.2N・m
54-2	55500004	NORD LOCK WASHER M5 (10PCS.)	
55	4AP54010	FAN SHROUD L GT33REU(N1)	
56	4AP55020	FAN SHROUD R GT33REU(N2)	
57	79871121	HEXAGON HEAD SCREW M3.0X10 SUS 10PCS/SET	Tightening torque 1.5N・m
58	79871740	WIDE WASHER 3X10X1 (10PCS/SET)	
59	79871760	P-HEAD SCREW 2.6X12(P-TITE) (10PCS/SET)	Tightening torque 0.2N・m
F1	54063102	STARTER GENERATOR CONTROLLER SGC-1095HV	
F2	74001041	ENGINE MANAGEMENT SYSTEM(EM-100)REU	
F3	54060000	SV-01 VOLT. SENSOR FOR EM-100	
F4	54067000	SC-01 CURRENT. SENSOR FOR EM-100	
F5	4AG81000	AIR CLEANER UNI (PK-4E)	Tightening torque 2.0N・m
F6	74002F10	IGNITION MODULE (IG-08A)	
F7	78300000	GASOLINE FUEL FILTER S	
F8	74001180	OSP-120 VOLTAGE REGULATOR (12V)	
F9	74001050	U2S-1 (USB ADAPTER)	

GT33REU



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STARTER GENERATOR CONTROLLER SGC-1095HV

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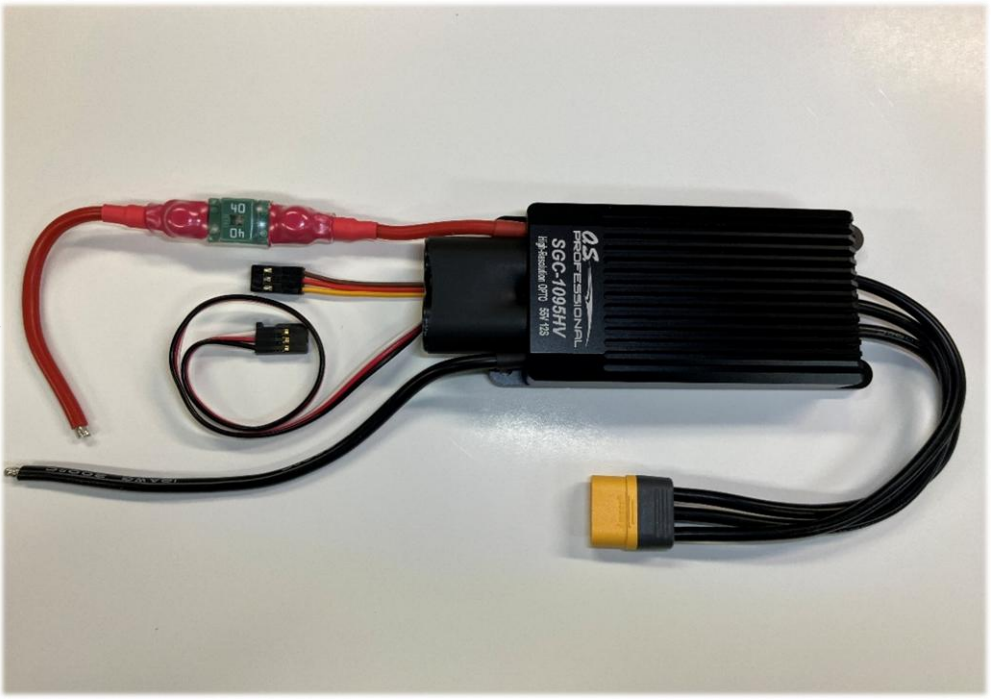
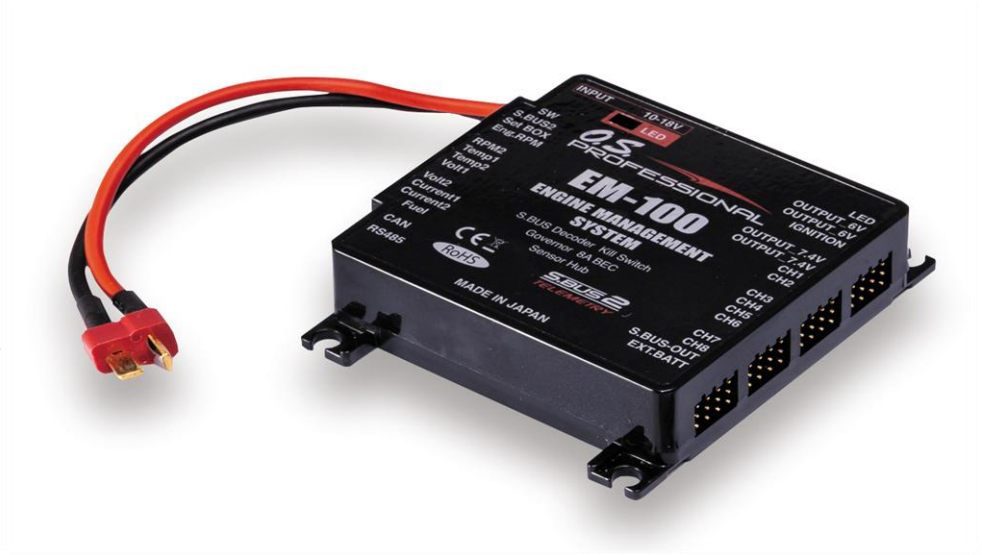


ENGINE MANAGEMENT SYSTEM(EM-100)REU

F2



SV-01 VOLT. SENSOR FOR EM-100

F3

SC-01 CURRENT. SENSOR FOR EM-100

F4

AIR CL PM-02 FUEL PUMP UNIT

F5

IGNITION MODULE (IG-08A)

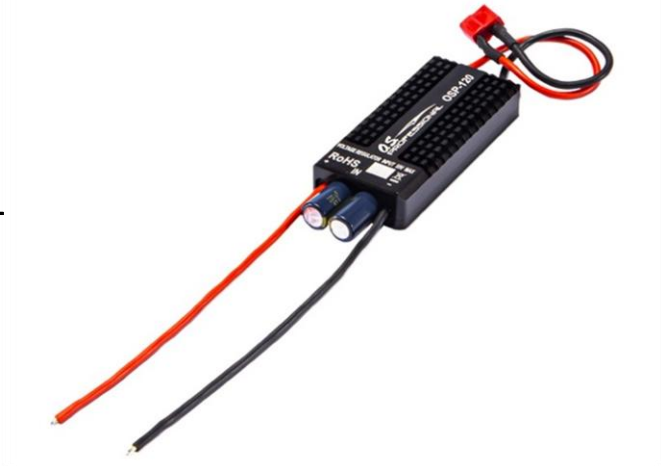
F6

GASOLINE FUEL FILTER S

F7

OSP-120 VOLTAGE REGULATOR (12V)

F8



U2S-1 (USB ADAPTER)

F9

MEMO