

## How to use this manual

# A Few Words About Safety

## SERVICE INFORMATION

The service and repair information contained in this manual is intended for use by qualified, professional technicians. Attempting service or repairs without the proper training, tools, and equipment could cause injury to you and/or others. It could also damage this Honda product or create an unsafe condition.

This manual describes the proper methods and procedures for performing service, maintenance, and repairs. Some procedures require the use special tools. Any person who intends to use a replacement part, service procedure, or a tool that is not recommended by Honda must determine the risks to their personal safety and the safe operation of this product.

If you need to replace a part, use Honda Genuine parts with the correct part number or an equivalent part. We strongly recommend that you do not use replacement parts of inferior quality.

## For Your Customer's Safety

Proper service and maintenance are essential to the customer's safety and the reliability of this product. Any error or oversight while servicing this product can result in faulty operation, damage to the product, or injury to others.

### ⚠ WARNING

Improper service or repairs can create an unsafe condition that can cause your customer or others to be seriously hurt or killed.

Follow the procedures and precautions in this manual and other service materials carefully.

## For Your Safety

Because this manual is intended for the professional service technician, we do not provide warnings about many basic shop safety practices (e.g., Hot parts-wear gloves). If you have not received shop safety training or do not feel confident about your knowledge of safe servicing practices, we recommend that you do not attempt to perform the procedures described in this manual.

Some of the most important general service safety precautions are given below. However, we cannot warn you of every conceivable hazard that can arise in performing service and repair procedures. Only you can decide whether or not you should perform a given task.

### ⚠ WARNING

Failure to properly follow instructions and precautions can cause you to be seriously hurt or killed.

Follow the procedures and precautions in this manual carefully.

## Important Safety Precautions

Make sure you have a clear understanding of all basic shop safety practices and that you are wearing appropriate clothing and using safety equipment. When performing any service task, be especially careful of the following:

- Read all of the instructions before you begin, and make sure you have the tools, the replacement or repair parts, and the skills required to perform the tasks safely and completely.
- Protect your eyes by using proper safety glasses, goggles, or face shields anytime you hammer, drill, grind, or work around pressurized air, pressurized liquids, springs, or other stored-energy components. If there is any doubt, put on eye protection.
- Use other protective wear when necessary, for example gloves or safety shoes. Handling hot or sharp parts can cause severe burns or cuts. Before you grab something that looks like it can hurt you, stop and put on gloves.
- Protect yourself and others whenever you have equipment hoisted in the air. Anytime you lift this product with a hoist, make sure that the hoist hook is securely attached to the product.

Make sure the engine is off before you begin any servicing procedures, unless the instruction tells you to do otherwise. This will help eliminate several potential hazards:

- Carbon monoxide poisoning from engine exhaust. Be sure there is adequate ventilation whenever you run the engine.
- Burns from hot parts. Let the engine and exhaust system cool before working in those areas.
- Injury from moving parts. If the instruction tells you to run the engine, be sure your hands, fingers and clothing are out of the way.

Gasoline vapors and hydrogen gasses from batteries are explosive. To reduce the possibility of a fire or explosion, be careful when working around gasoline or batteries.

- Use only a nonflammable solvent, not gasoline, to clean parts.
- Never store gasoline in an open container.
- Keep all cigarettes, sparks, and flames away from the battery and all fuel-related parts.

## How to use this manual

### INTRODUCTION

This supplement covers the construction, function and servicing procedures of the Honda GX240R2/RT2/T2/U2/UT2 and GX340R2/RT2/T2/U2/UT2 engines. For service information that is not covered in this supplement, please refer to the GX390RT2/T2/UT2 base shop manual (part number 62Z5F00) and GX270T2/UT2 supplement (part number 62Z5F00Z).

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at anytime without notice.


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As you read this manual, you will find information that is preceded by a **NOTICE** symbol. The purpose of this message is to help prevent damage to this Honda product, other property, or the environment.

### SAFETY MESSAGES

Your safety and the safety of others are very important. To help you make informed decisions, we have provided safety messages and other safety information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing these products. You must use your own good judgement.

You will find important safety information in a variety of forms, including:

- Safety Labels – on the product.
- Safety Messages – preceded by a safety alert symbol  and one of three signal words, DANGER, WARNING, or CAUTION. These signal words mean:

**⚠ DANGER** You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.


**⚠ WARNING** You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

**⚠ CAUTION** You CAN be HURT if you don't follow instructions.

- Instructions – how to service these products correctly and safely.

### OUTLINE OF CHANGES









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 The marked sections contain no changes. They are not covered in this supplement.

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SYMBOLS

The symbols used throughout this manual show specific service procedures. If supplementary information is required pertaining to these symbols, it will be explained specifically in the text without the use of the symbols.

	Replace the part(s) with new one(s) before assembly.
	Use the recommend engine oil, unless otherwise specified.
	Use molybdenum oil solution (mixture of the engine oil and molybdenum grease in a ratio of 1:1).
	Use multi-purpose grease (lithium based multi-purpose grease NLGI #2 or equivalent).
	Use marine grease (water resistant urea based grease).
	Apply a locking agent. Use a medium strength locking agent unless otherwise specified.
	Apply sealant.
	Use automatic transmission fluid.
(O x O) (O)	Indicates the diameter, length, and quantity of metric bolts used.
page 1-1	Indicates the reference page.

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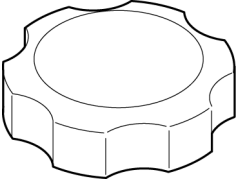
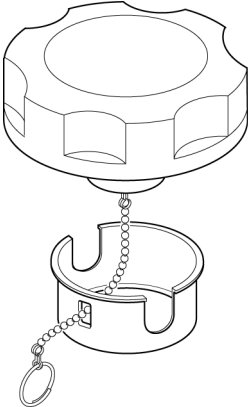
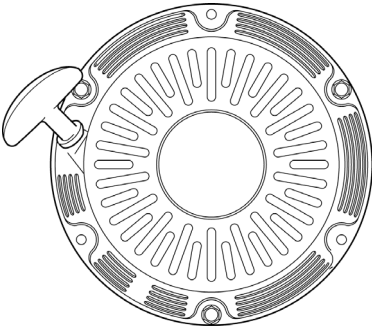
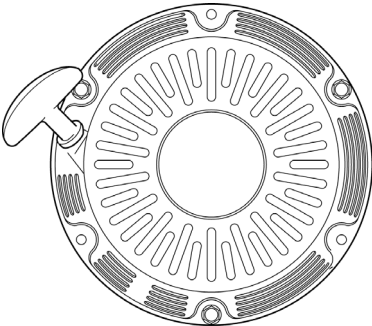
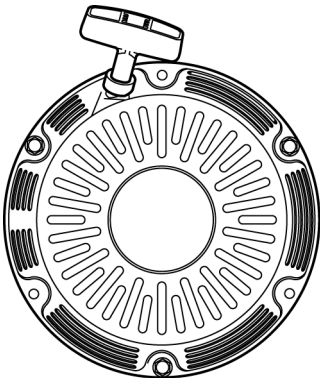
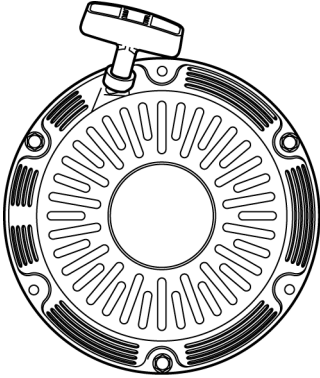
ABBREVIATIONS

Throughout this manual, the following abbreviations are used to identify the respective parts or systems.

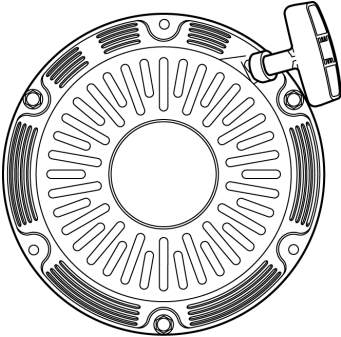
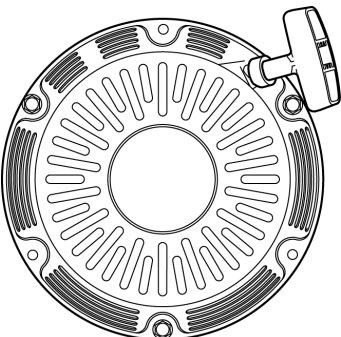
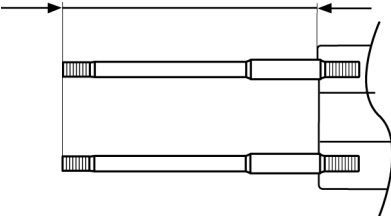
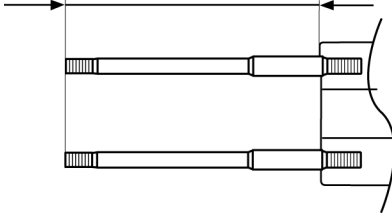
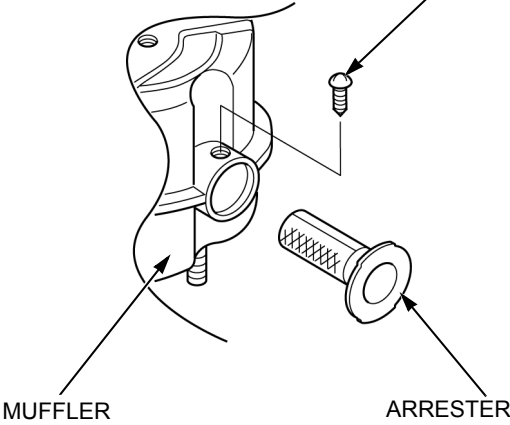
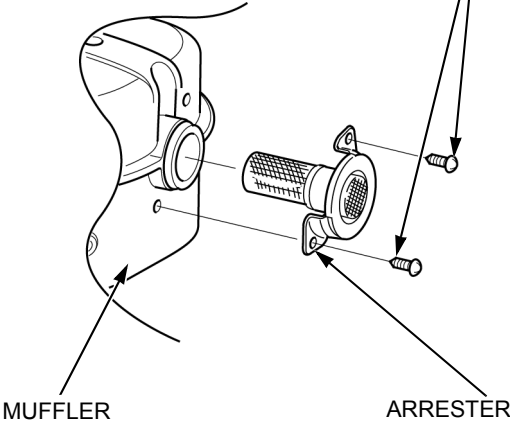
Abbreviated term	Full term
ACG	Alternator
A/F	Air Fuel Ratio
API	American Petroleum Institute
Approx.	Approximately
Assy.	Assembly
ATDC	After Top Dead Center
ATF	Automatic Transmission Fluid
ATT	Attachment
BAT	Battery
BDC	Bottom Dead Center
BTDC	Before Top Dead Center
BARO	Barometric Pressure
CKP	Crankshaft Position
Comp.	Complete
CMP	Camshaft Position
CYL	Cylinder
DLC	Data Link Connector
EBT	Engine Block Temperature
ECT	Engine Coolant Temperature
ECM	Engine Control Module
EMT	Exhaust Manifold Temperature
EOP	Engine Oil Pressure
EX	Exhaust
F	Front or Forward
GND	Ground
HO2S	Heated Oxygen Sensor
IAB	Intake Air Bypass
IAC	Idle Air Control
IAT	Intake Air Temperature
I.D.	Inside Diameter
IG or IGN	Ignition
IN	Intake
INJ	Injection
L.	Left
MAP	Manifold Absolute Pressure
MIL	Malfunction Indicator Lamp
O.D.	Outside Diameter
OP	Optional Part
PGM-FI	Programmed-Fuel Injection
P/N	Part Number
Qty	Quantity
R.	Right
SAE	Society of Automotive Engineers
SCS	Service Check Signal
STD	Standard
SW	Switch
TDC	Top Dead Center
TP	Throttle Position
VTEC	Variable Valve Timing & Valve Lift Electronic Control

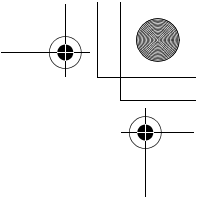
Bl	Black	G	Green	Br	Brown	Lg	Light green
Y	Yellow	R	Red	O	Orange	P	Pink
Bu	Blue	W	White	Lb	Light blue	Gr	Gray

OUTLINE OF CHANGES

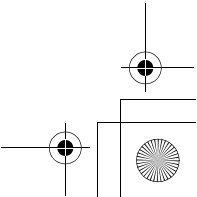
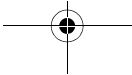
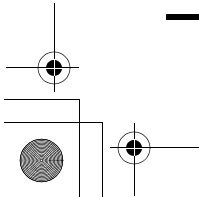
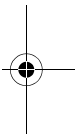
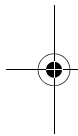
Item	GX240/340	GX390
Fuel filler cap	<div>GX240T2 HX/PX/QD/QX: GX340T2 PX/QX/VXK:</div> <div></div>	<div></div>
Recoil starter	<div>INSTALLATION DIRECTION Except GX240R2 EDN2/UT2 QAG2: Except GX340R2 EDN2/T2 VMT:</div> <div>TOP</div> <div></div>	<div>INSTALLATION DIRECTION DUAL ELEMENT / CYCLONE AIR CLEANER TYPE:</div> <div>TOP</div> <div></div>
	<div>INSTALLATION DIRECTION GX340T2 VMT:</div> <div>TOP</div> <div></div>	<div>INSTALLATION DIRECTION LOW PROFILE AIR CLEANER TYPE:</div> <div>TOP</div> <div></div>

OUTLINE OF CHANGES

Item	GX240/340	GX390
Recoil starter	<div>INSTALLING DIRECTION GX240R2 EDN2/UT2 QAG2: GX340R2 EDN2:</div> <div>TOP</div> <div></div>	<div>INSTALLING DIRECTION QDW9 / QHB4:</div> <div>TOP</div> <div></div>
Stud bolt	<div>CYLINDER STUD BOLT REPLACEMENT: (AIR CLEANER SIDE)</div> <div>STUD BOLT (8 x 98): 82.0 mm (3.23 in) STUD BOLT (8 x 106): 90.0 mm (3.54 in) STUD BOLT (8 x 115): 99.0 mm (3.90 in) STUD BOLT (8 x 123): 107.0 mm (4.21 in) STUD BOLT (8 x 131.5): 115.5 mm (4.55 in)</div> <div></div>	<div>CYLINDER STUD BOLT REPLACEMENT: (AIR CLEANER SIDE)</div> <div>STUD BOLT (8 x 106): 90.0 mm (3.54 in) STUD BOLT (8 x 115): 99.0 mm (3.90 in) STUD BOLT (8 x 131.5): 115.5 mm (4.55 in)</div> <div></div>
Arrester/ Screws	<div>GX240 SEPARATED PROTECTOR TYPE:</div> <div>SCREW</div> <div></div> <div>MUFFLER</div> <div>ARRESTER</div>	<div>SEPARATED PROTECTOR TYPE:</div> <div>SCREW</div> <div></div> <div>MUFFLER</div> <div>ARRESTER</div>

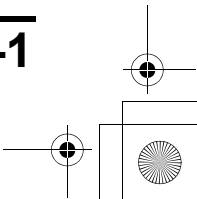
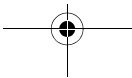
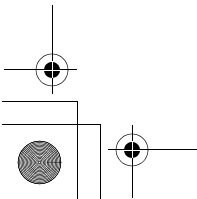
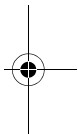
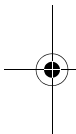


# MEMO



# 1. SPECIFICATIONS

TYPE CODE .....	1-2	PERFORMANCE CURVES.....	1-9
DIMENSIONS AND WEIGHTS .....	1-3	DIMENSIONAL DRAWINGS.....	1-11
ENGINE SPECIFICATIONS .....	1-7	P.T.O. DIMENSIONAL DRAWINGS .....	1-15





SPECIFICATIONS

TYPE CODE

GX240

Model	GX240R2	GX240RT2	GX240T2	GX240T2	GX240T2
Type	EDN2	VMT2	HX	PX	QD
P. T. O.	E type	V type	H type	P type	Q type

Model	GX240T2	GX240U2	GX240UT2	GX240UT2	GX240UT2
Type	QX	LX2	HA2	LX2	LXQ4
P. T. O.	Q type	L type	H type	L type	L type

Model	GX240UT2	GX240UT2	GX240UT2	GX240UT2	GX240UT2
Type	PA2	QA2	QAE2	QAG2	RA2
P. T. O.	P type	Q type	Q type	Q type	R type

Model	GX240UT2	GX240UT2	GX240UT2	GX240UT2	GX240UT2
Type	SXE4	SXQ4	VXB7	VXB9	WKT2
P. T. O.	S type	S type	V type	V type	W type

GX340

Model	GX340R2	GX340RT2	GX340RT2	GX340RT2	GX340RT2
Type	EDN2	VDE2	VWC	VWE	VWE2
P. T. O.	E type	V type	V type	V type	V type

Model	GX340T2	GX340T2	GX340T2	GX340T2	GX340U2
Type	PX	QX	VMT	VXK	QA2
P. T. O.	P type	Q type	E type	V type	Q type

Model	GX340UT2	GX340UT2	GX340UT2	GX340UT2	GX340UT2
Type	HA2	LXQ4	PKT2	QA2	QAE2
P. T. O.	H type	L type	P type	Q type	Q type

Model	GX340UT2	GX340UT2	GX340UT2	GX340UT2	GX340UT2
Type	QAP2	QNE2	SE	SXE4	SXQ4
P. T. O.	Q type	Q type	S type	S type	S type

Model	GX340UT2	GX340UT2	GX340UT2
Type	VA2	VX8	VXB7
P. T. O.	V type	V type	V type

SPECIFICATIONS

DIMENSIONS AND WEIGHTS

GX240

P.T.O. VARIATION

Model		GX240R2	GX240RT2	GX240T2	GX240U2	GX240UT2
Overall length	E type*	360 mm (14.2 in)	-	-	-	-
	H type*	-	-	425 mm (16.7 in)	-	425 mm (16.7 in)
	L type*	-	-	-	405 mm (15.9 in)	405 mm (15.9 in)
	P type*	-	-	380 mm (15.0 in)	-	380 mm (15.0 in)
	Q type*	-	-	380 mm (15.0 in)	-	380 mm (15.0 in)
	R type*	-	-	-	-	440 mm (17.3 in)
	S type*	-	-	-	-	355 mm (14.0 in)
	V type*	-	420 mm (16.5 in)	-	-	400 mm (15.7 in)
	W type*	-	-	-	-	370 mm (14.6 in)
Overall width	E type*	428 mm (16.9 in)	-	-	-	-
	H type*	-	-	428 mm (16.9 in)	-	428 mm (16.9 in)
	L type*	-	-	-	428 mm (16.9 in)	428 mm (16.9 in)
	P type*	-	-	428 mm (16.9 in)	-	428 mm (16.9 in)
	Q type*	-	-	428 mm (16.9 in)	-	428 mm (16.9 in)
	R type*	-	-	-	-	428 mm (16.9 in)
	S type*	-	-	-	-	428 mm (16.9 in)
	V type*	-	428 mm (16.9 in)	-	-	428 mm (16.9 in)
	W type*	-	-	-	-	428 mm (16.9 in)
Overall height	E type*	303 mm (11.9 in)	-	-	-	-
	H type*	-	-	410 mm (16.1 in)	-	422 mm (16.6 in)
	L type*	-	-	-	422 mm (16.6 in)	422 mm (16.6 in)
	P type*	-	-	410 mm (16.1 in)	-	422 mm (16.6 in)
	Q type*	-	-	410 mm (16.1 in)	-	422 mm (16.6 in)
	R type*	-	-	-	-	422 mm (16.6 in)
	S type*	-	-	-	-	422 mm (16.6 in)
	V type*	-	303 mm (11.9 in)	-	-	422 mm (16.6 in)
	W type*	-	-	-	-	422 mm (16.6 in)

SPECIFICATIONS

Model		GX240R2	GX240RT2	GX240T2	GX240U2	GX240UT2
Dry weight	E type*	21.4 kg (47.2 lbs)	-	-	-	-
	H type*	-	-	26.5 kg (58.4 lbs)	-	26.5 kg (58.4 lbs)
	L type*	-	-	-	26.5 kg (58.4 lbs)	26.5 kg (58.4 lbs)
	P type*	-	-	25.8 kg (56.9 lbs)	-	25.8 kg (56.9 lbs)
	Q type*	-	-	25.8 kg (56.9 lbs)	-	25.8 kg (56.9 lbs)
	R type*	-	-	-	-	30.0 kg (66.1 lbs)
	S type*	-	-	-	-	25.8 kg (56.9 lbs)
	V type*	-	21.4 kg (47.2 lbs)	-	-	25.8 kg (56.9 lbs)
	W type*	-	-	-	-	25.8 kg (56.9 lbs)
Operating weight	E type*	26.1 kg (57.5 lbs)	-	-	-	-
	H type*	-	-	31.5 kg (69.4 lbs)	-	31.5 kg (69.4 lbs)
	L type*	-	-	-	31.5 kg (69.4 lbs)	31.5 kg (69.4 lbs)
	P type*	-	-	30.5 kg (67.2 lbs)	-	30.5 kg (67.2 lbs)
	Q type*	-	-	30.5 kg (67.2 lbs)	-	30.5 kg (67.2 lbs)
	R type*	-	-	-	-	35.0 kg (77.2 lbs)
	S type*	-	-	-	-	30.5 kg (67.2 lbs)
	V type*	-	26.1 kg (57.5 lbs)	-	-	30.5 kg (67.2 lbs)
	W type*	-	-	-	-	30.5 kg (67.2 lbs)

\*: P. T. O. type. (page 1-2)

EQUIPMENT VARIATION

Indicates the difference compared with values of P. T. O. variation above.

Variation	No balancer type	Cyclone air cleaner type	Starter motor type	Control box type	Low profile type *1
Overall length difference	-	-	-	-	+ 20 mm (0.8 in)
Overall width difference	-	+ 96 mm (3.8 in)	-	+ 34 mm (1.3 in)	-
Overall height difference	-	-	-	-	- 119 mm (4.7 in)
Dry weight difference	- 0.9 kg (2.0 lbs)	+ 0.2 kg (0.4 lbs)	+ 2.5 kg (5.5 lbs)	+ 3.2 kg (7.1 lbs)	- 4.4 kg (9.7 lbs)
Operating weight difference	- 0.9 kg (2.0 lbs)	+ 0.2 kg (0.4 lbs)	+ 2.5 kg (5.5 lbs)	+ 3.2 kg (7.1 lbs)	- 4.4 kg (9.7 lbs)

\*1: No fuel tank and muffler, use low profile type air cleaner.

SPECIFICATIONS

GX340

P.T.O. VARIATION

Model		GX340R2	GX340RT2	GX340T2	GX340U2	GX340UT2
Overall length	E type*	365 mm (14.4 in)	-	365 mm (14.4 in)	-	-
	H type*	-	-	-	-	452 mm (17.8 in)
	L type*	-	-	-	-	440 mm (17.3 in)
	P type*	-	-	405 mm (15.9 in)	-	405 mm (15.9 in)
	Q type*	-	-	405 mm (15.9 in)	405 mm (15.9 in)	405 mm (15.9 in)
	S type*	-	-	-	-	380 mm (15.0 in)
	V type*	-	430 mm (16.9 in)	425 mm (16.7 in)	-	425 mm (16.7 in)
Overall width	E type*	460 mm (18.1 in)	-	460 mm (18.1 in)	-	-
	H type*	-	-	-	-	460 mm (18.1 in)
	L type*	-	-	-	-	460 mm (18.1 in)
	P type*	-	-	460 mm (18.1 in)	-	460 mm (18.1 in)
	Q type*	-	-	460 mm (18.1 in)	460 mm (18.1 in)	460 mm (18.1 in)
	S type*	-	-	-	-	460 mm (18.1 in)
	V type*	-	460 mm (18.1 in)	460 mm (18.1 in)	-	460 mm (18.1 in)
Overall height	E type*	313 mm (12.3 in)	-	448 mm (17.6 in)	-	-
	H type*	-	-	-	-	448 mm (17.6 in)
	L type*	-	-	-	-	448 mm (17.6 in)
	P type*	-	-	448 mm (17.6 in)	-	448 mm (17.6 in)
	Q type*	-	-	448 mm (17.6 in)	448 mm (17.6 in)	448 mm (17.6 in)
	S type*	-	-	-	-	448 mm (17.6 in)
	V type*	-	313 mm (12.3 in)	448 mm (17.6 in)	-	448 mm (17.6 in)
Dry weight	E type*	27.3 kg (60.2 lbs)	-	31.7 kg (69.9 lbs)	-	-
	H type*	-	-	-	-	35.2 kg (77.6 lbs)
	L type*	-	-	-	-	35.2 kg (77.6 lbs)
	P type*	-	-	31.7 kg (69.9 lbs)	-	31.7 kg (69.9 lbs)
	Q type*	-	-	31.7 kg (69.9 lbs)	31.7 kg (69.9 lbs)	31.7 kg (69.9 lbs)
	S type*	-	-	-	-	31.7 kg (69.9 lbs)
	V type*	-	27.3 kg (60.2 lbs)	31.7 kg (69.9 lbs)	-	31.7 kg (69.9 lbs)

SPECIFICATIONS

Model		GX340R2	GX340RT2	GX340T2	GX340U2	GX340UT2
Operating weight	E type*	33.4 kg (73.6 lbs)	-	37.8 kg (83.3 lbs)	-	-
	H type*	-	-	-	-	41.2 kg (90.8 lbs)
	L type*	-	-	-	-	41.2 kg (90.8 lbs)
	P type*	-	-	37.8 kg (83.3 lbs)	-	37.8 kg (83.3 lbs)
	Q type*	-	-	37.8 kg (83.3 lbs)	37.8 kg (83.3 lbs)	37.8 kg (83.3 lbs)
	S type*	-	-	-	-	37.8 kg (83.3 lbs)
	V type*	-	33.4 kg (73.6 lbs)	37.8 kg (83.3 lbs)	-	37.8 kg (83.3 lbs)

\*: P. T. O. type. (page 1-2)

EQUIPMENT VARIATION

Indicates the difference compared with values of P. T. O. variation above.

Variation	Cyclone air cleaner type	Starter motor type	Control box type	Low profile type *1
Overall length difference	-	-	-	+ 6 mm (0.2 in)
Overall width difference	+ 93 mm (3.7 in)	± 5 mm (0.2 in)	+ 39 mm (1.5 in)	-
Overall height difference	-	-	-	- 135 mm (5.3 in)
Dry weight difference	+ 0.2 kg (0.4 lbs)	+ 2.5 kg (5.5 lbs)	+ 3.2 kg (7.1 lbs)	- 4.4 kg (9.7 lbs)
Operating weight difference	+ 0.2 kg (0.4 lbs)	+ 2.5 kg (5.5 lbs)	+ 3.2 kg (7.1 lbs)	- 4.4 kg (9.7 lbs)

\*1: No fuel tank and muffler, use low profile type air cleaner.

## SPECIFICATIONS

## ENGINE SPECIFICATIONS

## GX240

Model	GX240R2	GX240RT2	GX240T2	GX240U2	GX240UT2
Description code	GCBPK	GCBJT	GCBKT	GCBPK	GCBJT
Type	4 stroke, overhead valve, single cylinder, inclined by 25°				
Displacement	270 cm <sup>3</sup> (16.5 cu-in)				
Bore x stroke	77.0 x 58.0 mm (3.0 x 2.3 in)				
Net power (SAE J1349)*1	5.9 kW (7.9 HP) / 3,600 min <sup>-1</sup> (rpm)*2				
Continuous rated power	4.6 kW (6.1 HP) / 3,600 min <sup>-1</sup> (rpm)				
Maximum net torque (SAE J1349)*1	18.3 N·m (1.86 kgf·m, 13.4 lbf·ft) / 2,500 min <sup>-1</sup> (rpm)				
Compression ratio	8.5: 1				
Fuel consumption (at continuous rated power)	2.2 Liters (0.58 US gal, 0.48 Imp gal) / h				
Ignition system	C.D.I.(Capacitor Discharge Ignition) type magneto ignition				
Ignition timing	B.T.D.C. 10° / 1,400min <sup>-1</sup> (rpm)				
Spark advancer performance	B.T.D.C. 10°- 20°				
Spark plug	BPR6ES (NGK) / W20EPR-U (DENSO)				
Lubrication system	Forced splash				
Oil capacity	1.1 Liters (1.16 US qt, 0.97 Imp qt)				
Recommended oil	SAE 10W-30 API service classification SE or later				
Cooling system	Forced air				
Starting system	Recoil, Recoil and Starter motor				
Stopping system	Ignition exciter coil circuit open				
Carburetor	Horizontal type, butterfly valve				
Air cleaner	Dual element type, Cyclone type, Oil bath type, Low profile type				
Governor	Mechanical centrifugal				
Breather system	Reed valve type				
Fuel used	Unleaded gasoline with a pump octane rating 86 or higher				
Reduction case oil capacity (1/2 reduction with clutch)	0.3 Liters (0.32 US qt, 0.26 Imp qt)				
Clutch (1/2 reduction with clutch)	Type	Centrifugal			
	Engagement start	1,800 min <sup>-1</sup> (rpm)			
	Lock	2,200 min <sup>-1</sup> (rpm)			

\*1: The power rating of the engine indicated in this document is the net power output tested on a production engine for the engine model and measured in accordance with SAE J1349 at 3,600 rpm (net power) and at 2,500 rpm (max net torque). Mass production engines may vary from this value. Actual power output for the engine installed in the final machine will vary depending on numerous factors, including the operating speed of the engine in application, environmental conditions, maintenance, and other variables.

\*2: Base type includes a balancer, dual type air cleaner, and standard type muffler.

SPECIFICATIONS

GX340

Model	GX340R2	GX340RT2	GX340T2	GX340U2	GX340UT2
Description code	GCBKK	GCBET	GCBFT	GCBKK	GCBET
Type	4 stroke, overhead valve, single cylinder, inclined by 25°				
Displacement	389 cm3 (23.7 cu-in)				
Bore x stroke	88.0 x 64.0 mm (3.5 x 2.5 in)				
Net power (SAE J1349)*1	8.0 kW (10.7 HP) / 3,600 min-1 (rpm)*2				
Continuous rated power	6.3 kW (8.4 HP) / 3,600 min-1 (rpm)				
Maximum net torque (SAE J1349)*1	26.4 N·m (2.69 kgf-m, 19.5 lbf-ft) / 2,500 min-1 (rpm)				
Compression ratio	8.2: 1				
Fuel consumption (at continuous rated power)	3.1 Liters (0.82 US gal, 0.68 Imp gal) / h				
Ignition system	C.D.I.(Capacitor Discharge Ignition) type magneto ignition				
Ignition timing	B.T.D.C. 10° / 1,400min-1 (rpm)				
Spark advancer performance	B.T.D.C. 10°- 22°				
Spark plug	BPR6ES (NGK) / W20EPR-U (DENSO)				
Lubrication system	Forced splash				
Oil capacity	1.1 Liters (1.16 US qt, 0.97 Imp qt)				
Recommended oil	SAE 10W-30 API service classification SE or later				
Cooling system	Forced air				
Starting system	Recoil, Recoil and Starter motor				
Stopping system	Ignition exciter coil circuit open				
Carburetor	Horizontal type, butterfly valve				
Air cleaner	Dual element type, Cyclone type, Oil bath type, Low profile type				
Governor	Mechanical centrifugal				
Breather system	Reed valve type				
Fuel used	Unleaded gasoline with a pump octane rating 86 or higher				

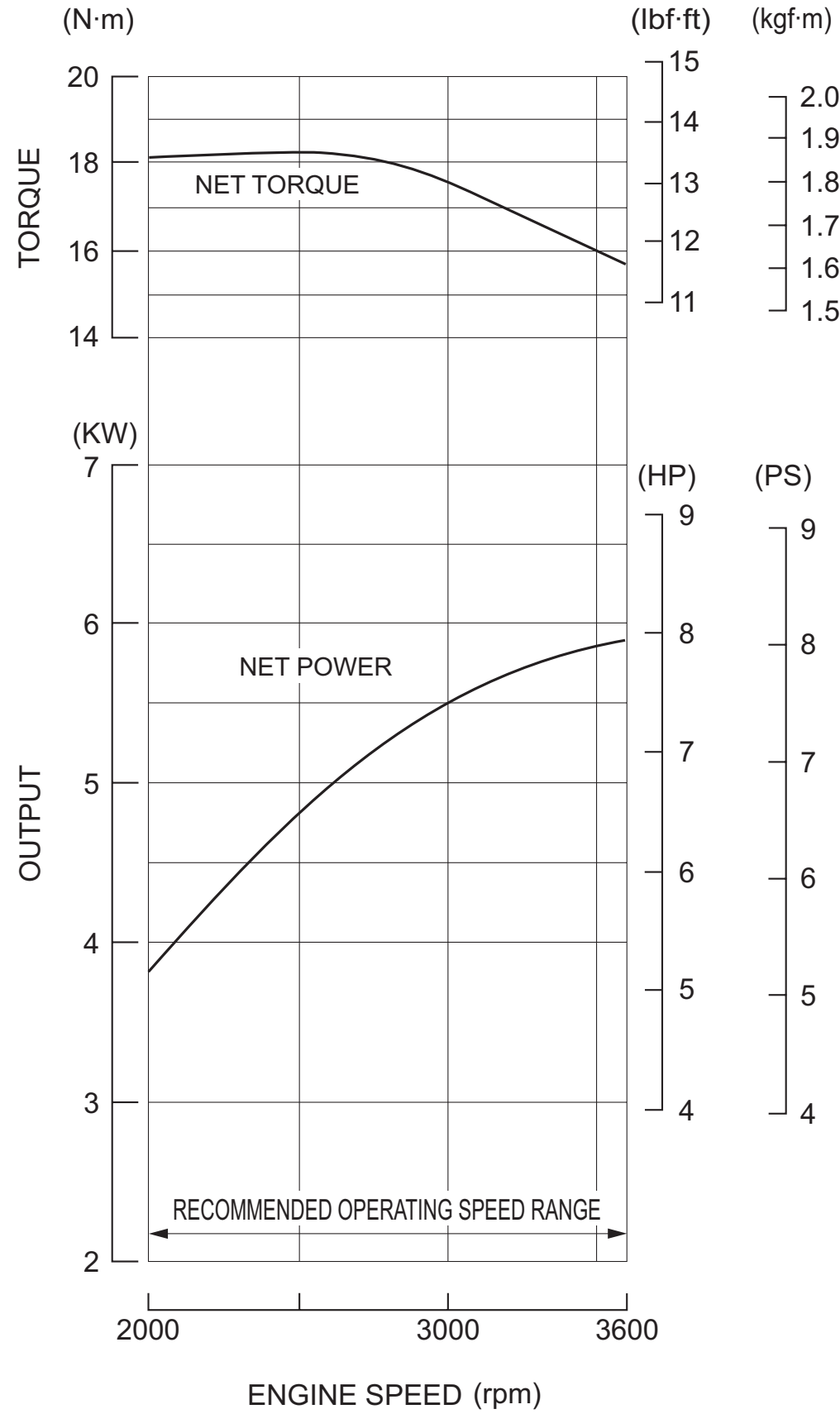
\*1: The power rating of the engine indicated in this document is the net power output tested on a production engine for the engine model and measured in accordance with SAE J1349 at 3,600 rpm (net power) and at 2,500 rpm (max net torque). Mass production engines may vary from this value. Actual power output for the engine installed in the final machine will vary depending on numerous factors, including the operating speed of the engine in application, environmental conditions, maintenance, and other variables.

\*2: Base type includes a balancer, dual type air cleaner, and standard type muffler.

SPECIFICATIONS

PERFORMANCE CURVES

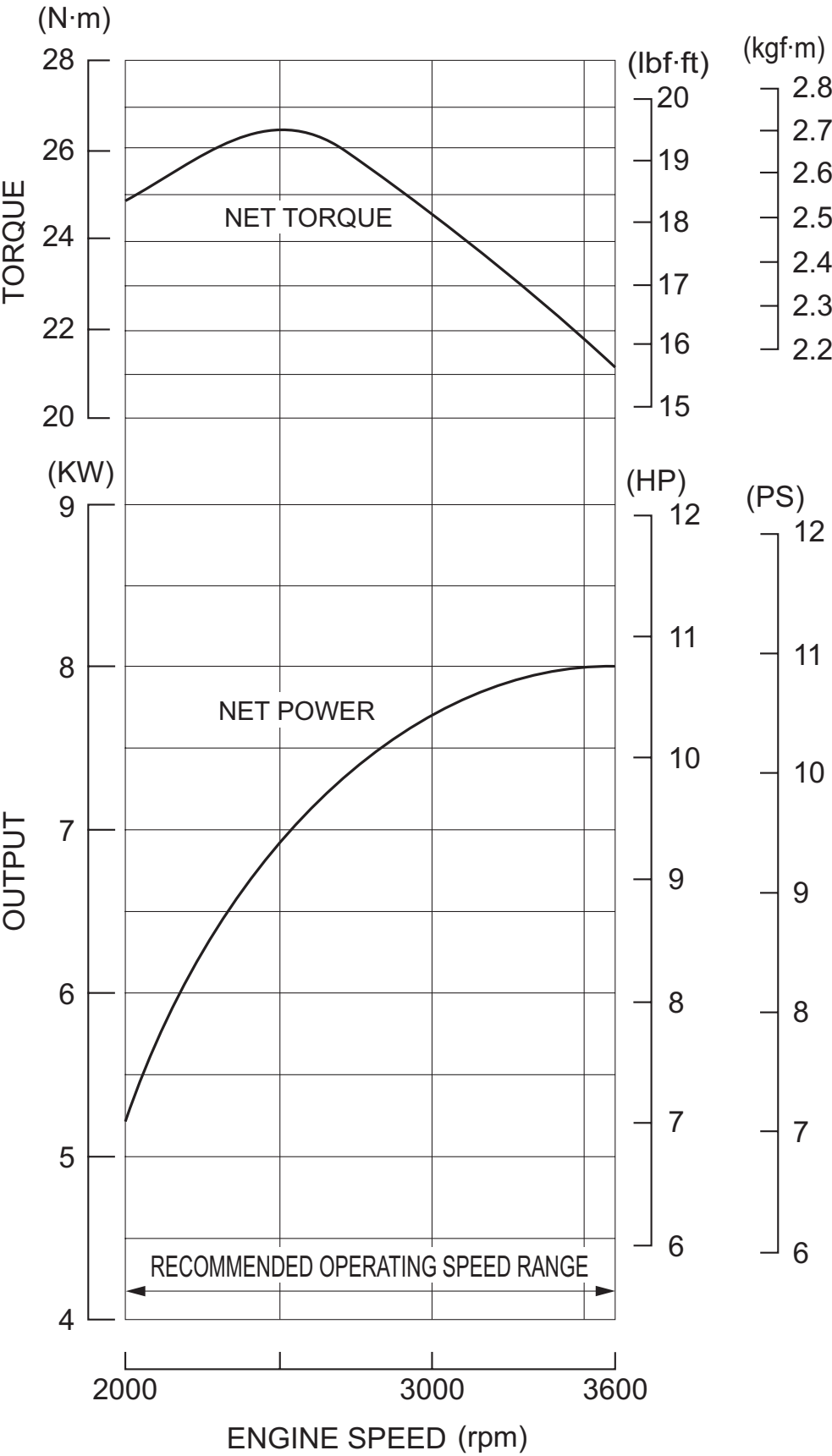
GX240





# SPECIFICATIONS

## GX340



## SPECIFICATIONS

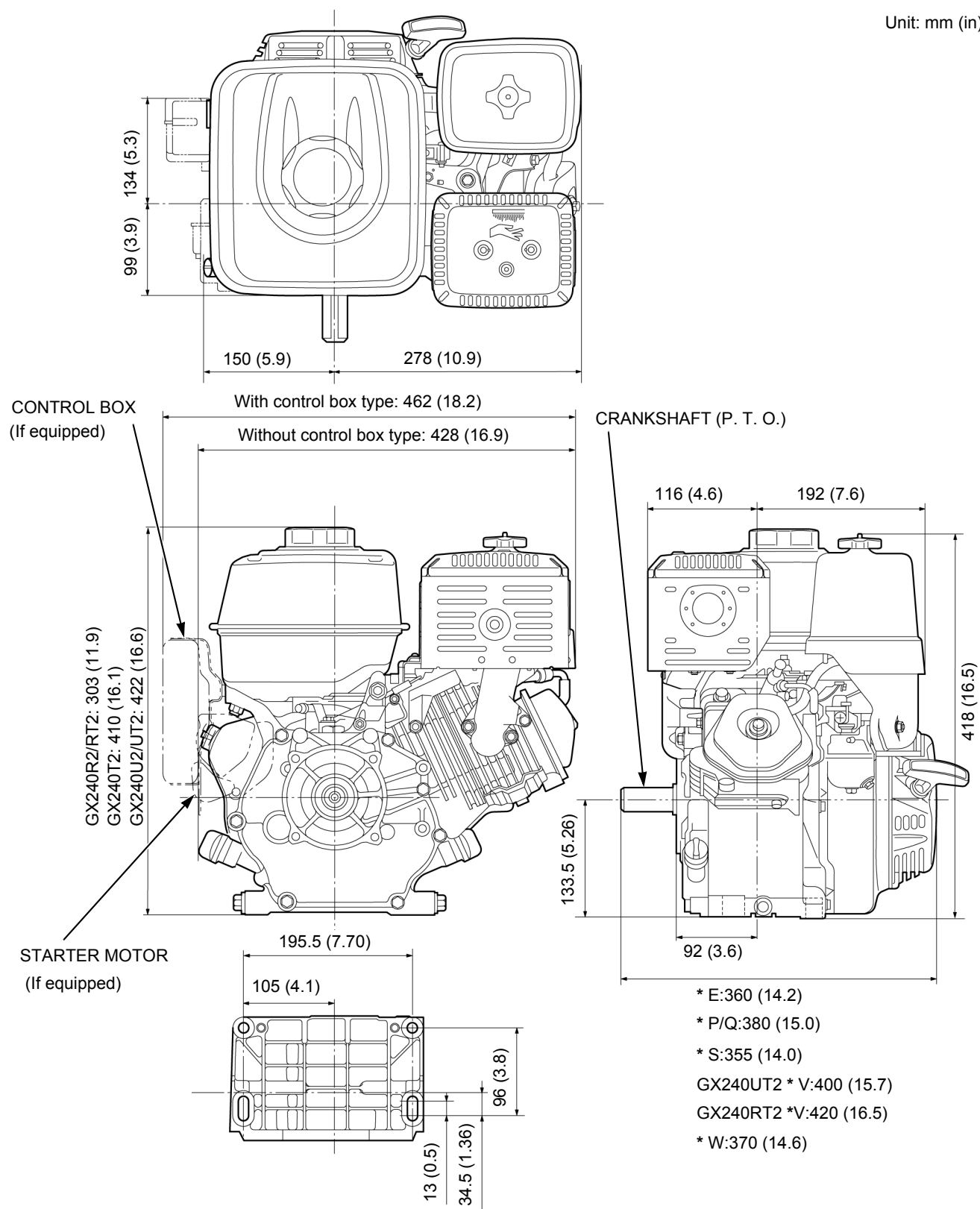
## DIMENSIONAL DRAWINGS

\*: P. T. O. type. (page 1-2)

## GX240

## WITHOUT REDUCTION UNIT TYPE

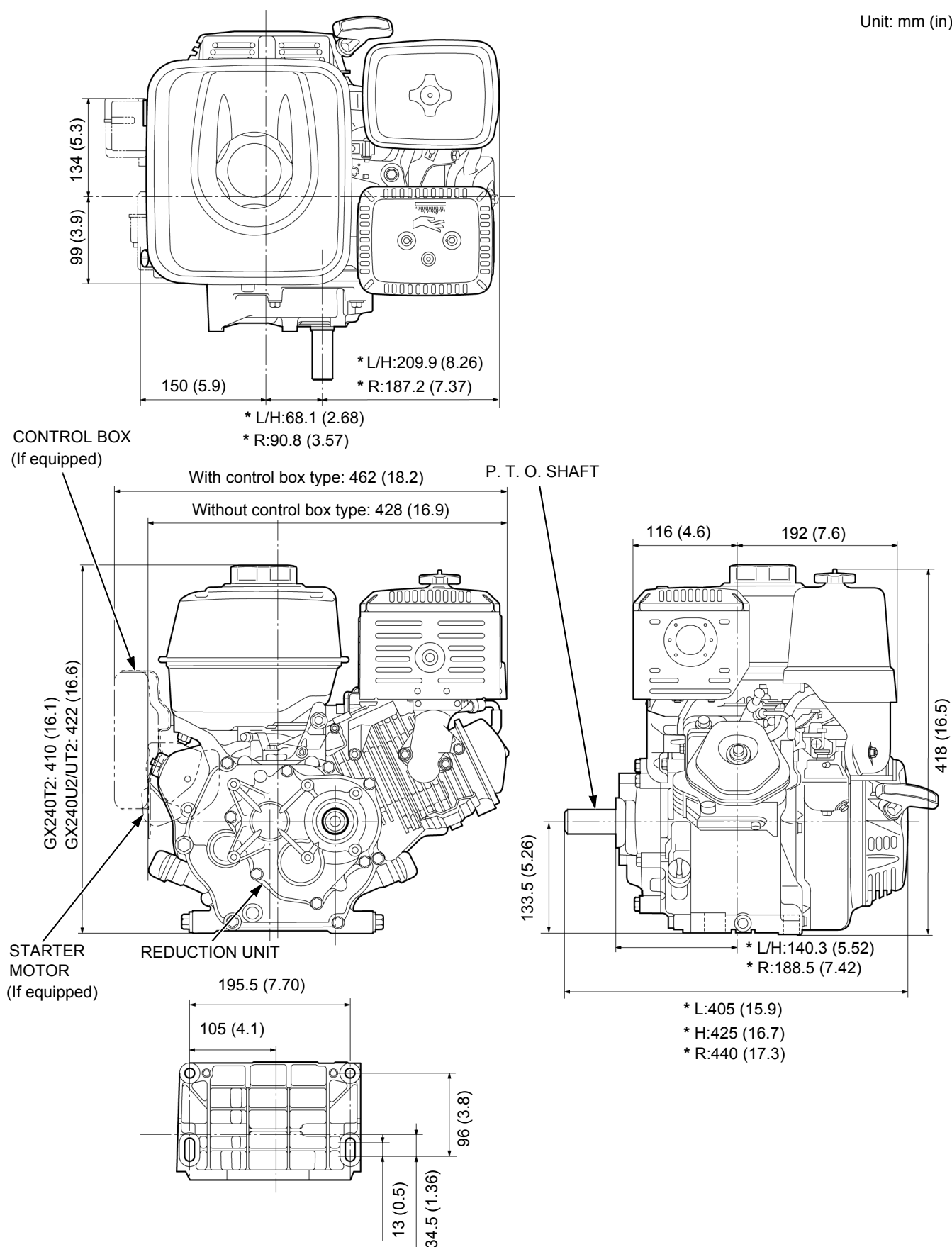
Unit: mm (in)



## SPECIFICATIONS

### WITH REDUCTION UNIT TYPE

Unit: mm (in)

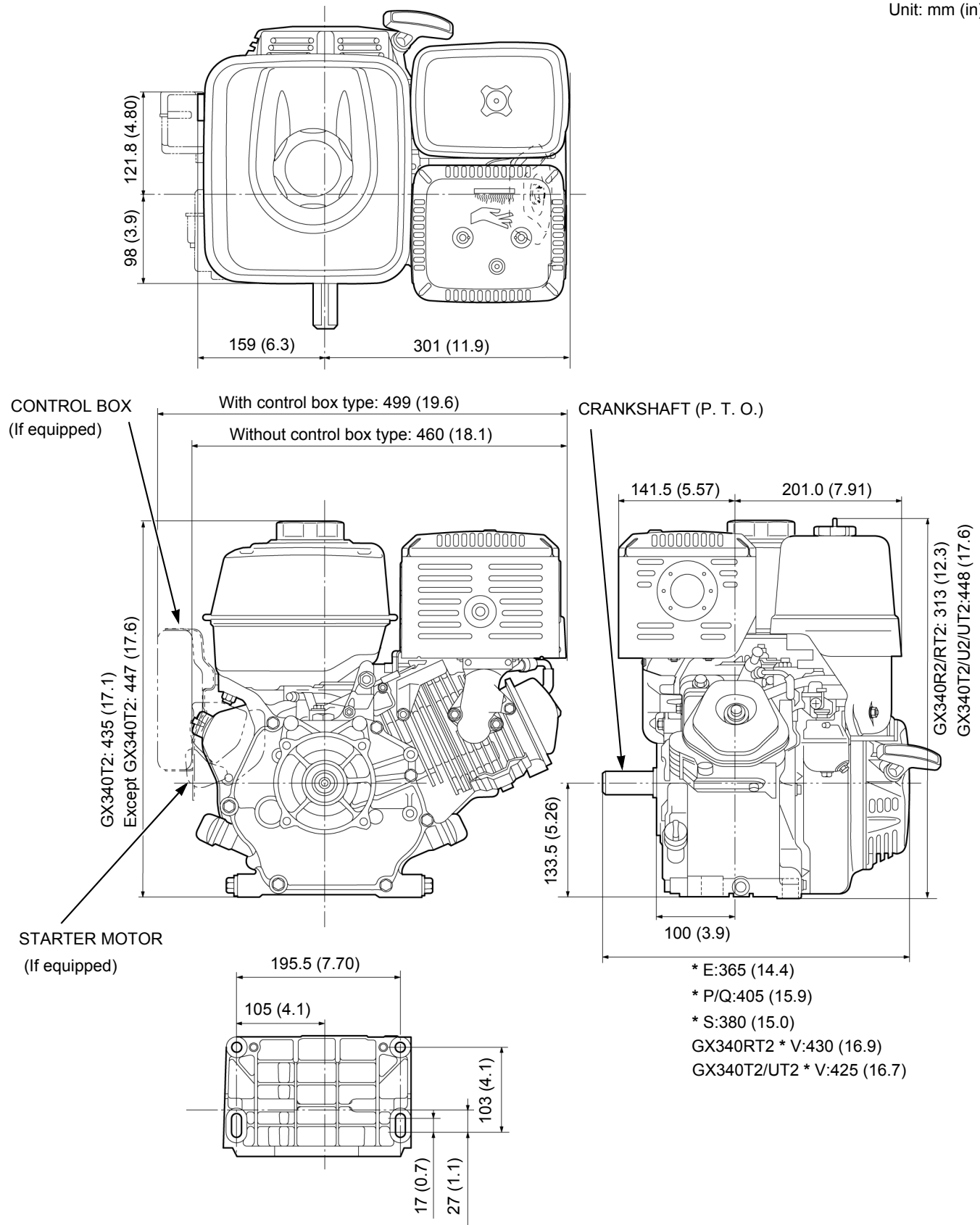


## SPECIFICATIONS

### GX340

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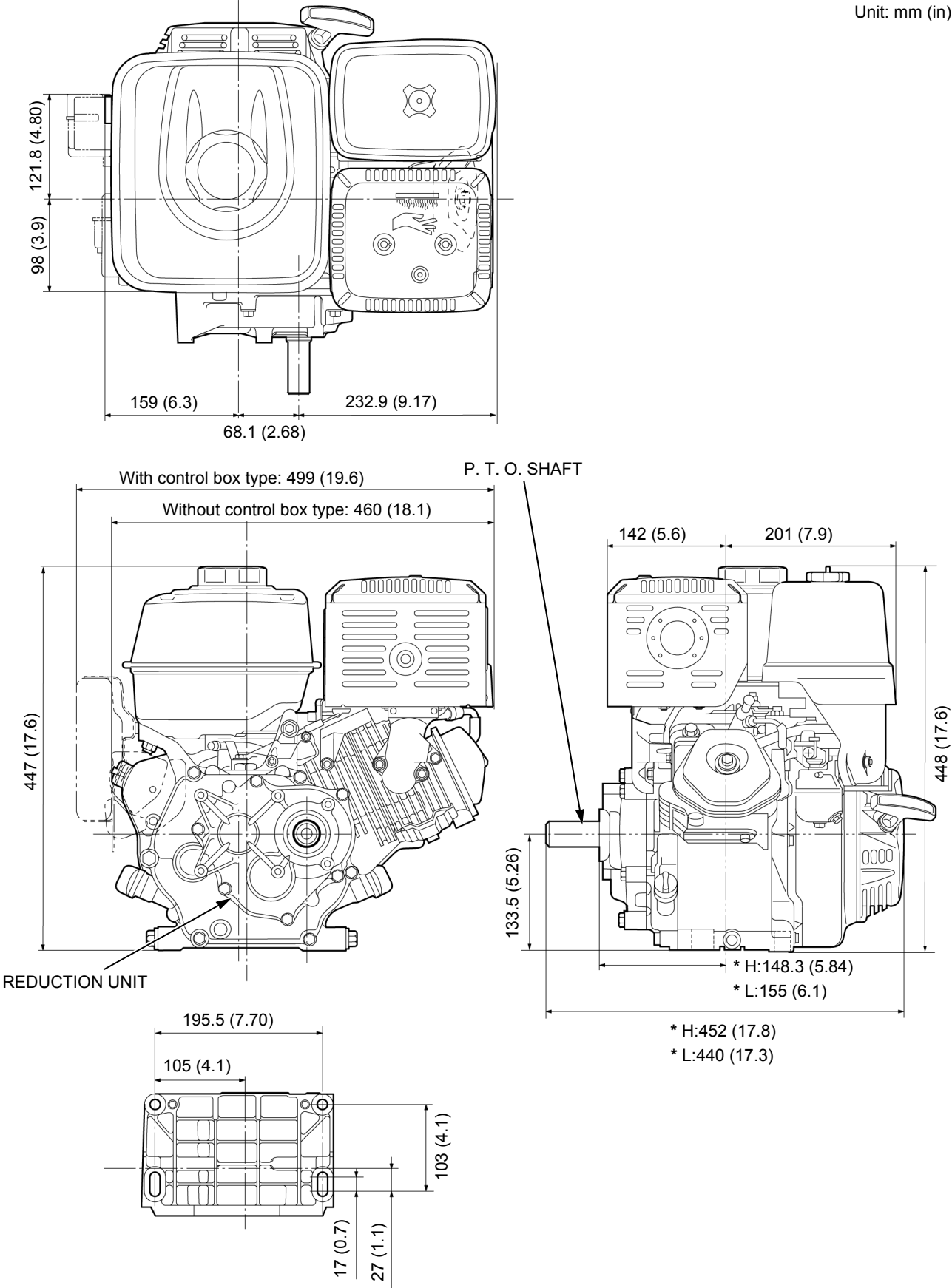
Unit: mm (in)



# SPECIFICATIONS

## WITH REDUCTION UNIT TYPE

Unit: mm (in)



## SPECIFICATIONS

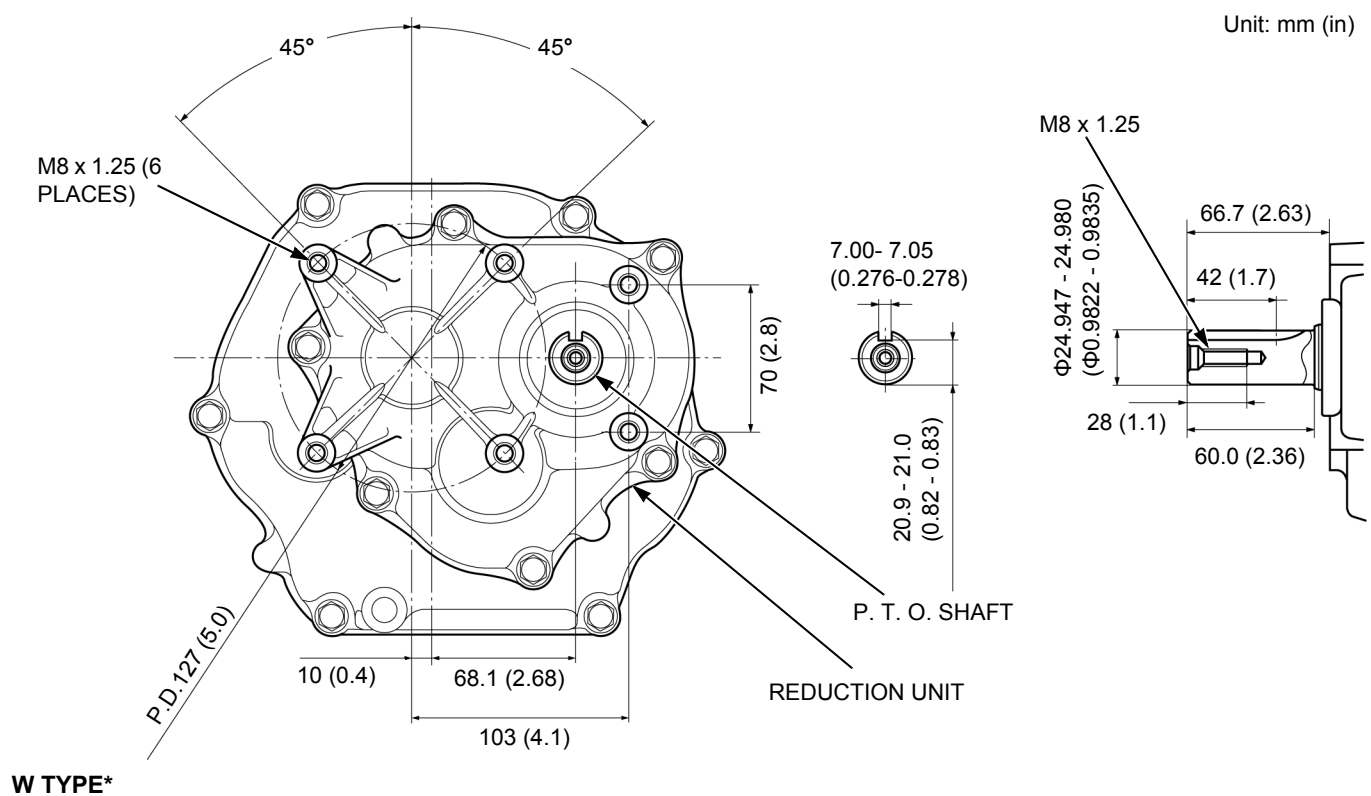
## P.T.O. DIMENSIONAL DRAWINGS

## GX240

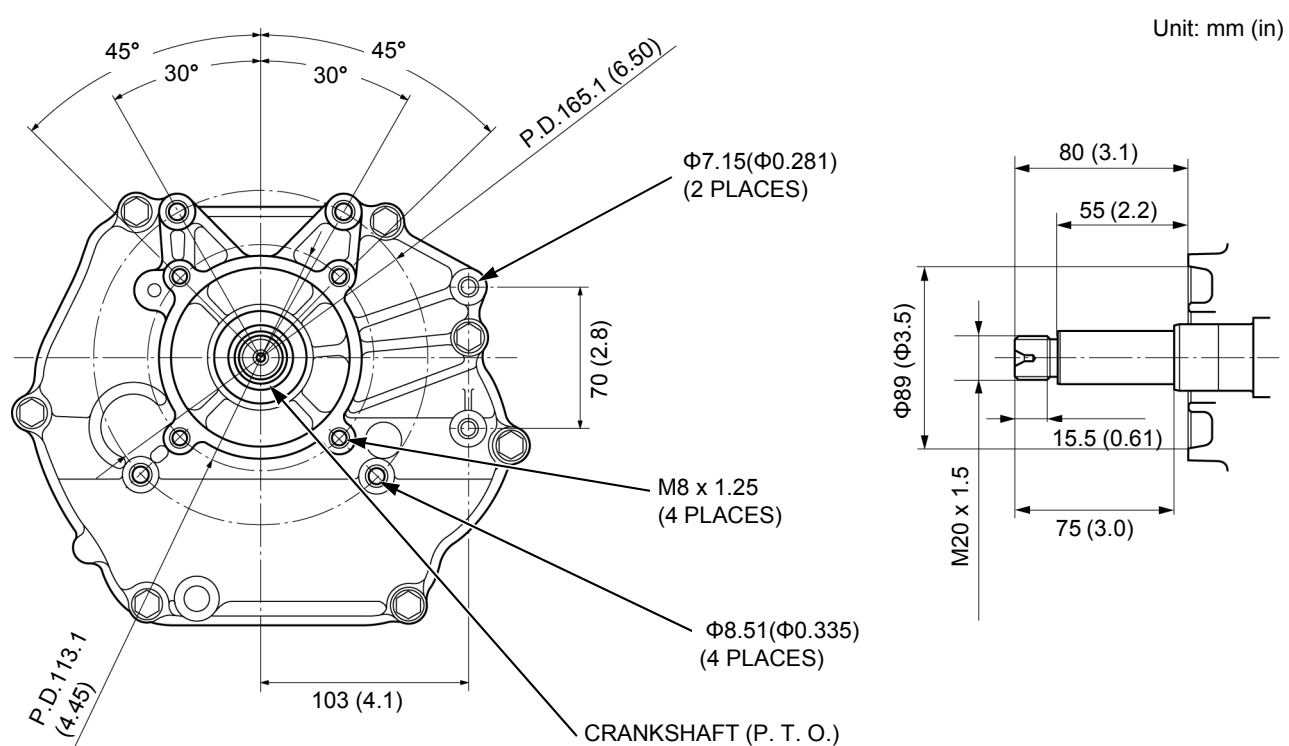
\*: P. T. O. type. (page 1-2)

Except L type and W type (base shop manual:62Z5F00Z)

## L TYPE\* (WITH REDUCTION UNIT)



## W TYPE\*



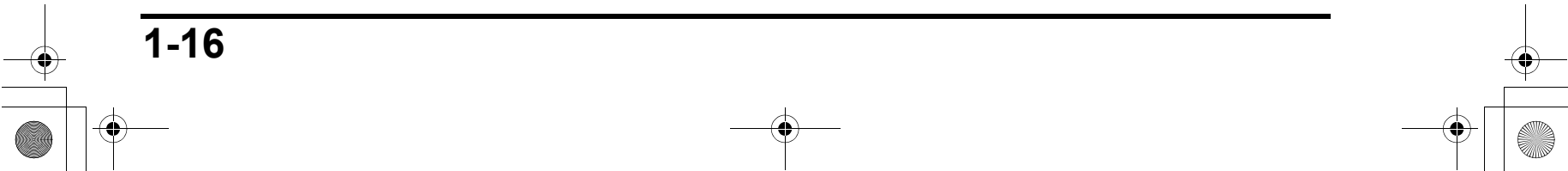


SPECIFICATIONS

GX340

\*: P. T. O. type. (page 1-2)

P.T.O. DIMENSIONAL DRAWINGS (base shop manual:62Z5F00)



## 2. SERVICE INFORMATION

2

MAINTENANCE STANDARDS .....	2-2	LUBRICATION & SEAL POINT .....	2-4
TORQUE VALUES .....	2-4	HARNESS AND TUBE ROUTING .....	2-5



## SERVICE INFORMATION

# MAINTENANCE STANDARDS

## GX240

Unit: mm (in)

Part	Item		Standard	Service limit
Engine	Maximum speed (at no load)		3,850 ± 150 min <sup>-1</sup> (rpm)	—
	Idle speed		1,400 ± 150 min <sup>-1</sup> (rpm)	—
	Cylinder compression		0.59 - 0.83 MPa (6.0 - 8.5 kgf/cm <sup>2</sup> , 85 - 121 psi) / 600 min <sup>-1</sup> (rpm)	—
Cylinder head	Warpage		—	0.10 (0.004)
Cylinder	Sleeve I.D.		77.000 – 77.017 (3.0315 – 3.0322)	77.17 (3.038)
Piston	Skirt O.D.		76.975 – 76.985 (3.0305 – 3.0309)	76.85 (3.026)
	Piston-to-cylinder clearance		0.015 – 0.042 (0.0006 – 0.0017)	0.12 (0.005)
	Piston pin bore I.D.		18.002 – 18.008 (0.7087 – 0.7090)	18.042 (0.7103)
Piston pin	Pin O.D.		17.994 – 18.000 (0.7084 – 0.7087)	17.95 (0.707)
	Piston pin-to-piston pin bore clearance		0.002 – 0.014 (0.0001 – 0.0006)	0.08 (0.003)
Piston rings	Ring side clearance	Top	0.030 – 0.060 (0.0012 – 0.0024)	0.15 (0.006)
		Second	0.030 – 0.060 (0.0012 – 0.0024)	0.15 (0.006)
	Ring end gap	Top	0.200 – 0.350 (0.0079 – 0.0138)	1.0 (0.04)
		Second	0.350 – 0.500 (0.0138 – 0.0197)	1.0 (0.04)
		Oil (side rail)	0.2 – 0.7 (0.01 – 0.03)	1.0 (0.04)
	Ring width	Top	1.160 – 1.175 (0.0457 – 0.0463)	1.140 (0.0449)
		Second	1.160 – 1.175 (0.0457 – 0.0463)	1.140 (0.0449)
Connecting rod	Small end I.D.		18.005 – 18.020 (0.7089 – 0.7094)	18.07 (0.711)
	Big end side clearance		0.1 – 0.4 (0.004 – 0.016)	1.0 (0.04)
	Big end I.D.		33.025 – 33.039 (1.3002 – 1.3007)	33.07 (1.302)
	Big end oil clearance		0.040 – 0.064 (0.0016 – 0.0025)	0.12 (0.005)
Crankshaft	Crank pin O.D.		32.975 – 32.985 (1.2982 – 1.2986)	32.92 (1.296)
	Crankshaft runout		—	0.1 (0.004)
Cylinder barrel (Crankcase)	Camshaft bearing I.D.		16.000 – 16.018 (0.6299 – 0.6306)	16.05 (0.632)
Crankcase cover	Camshaft bearing I.D.		16.000 – 16.018 (0.6299 – 0.6306)	16.05 (0.632)
Valves	Valve clearance	IN	0.15 ± 0.02	—
		EX	0.20 ± 0.02	—
	Valve stem O.D.	IN	6.575 – 6.590 (0.2589 – 0.2594)	6.44 (0.254)
		EX	6.535 – 6.550 (0.2573 – 0.2579)	6.40 (0.252)
	Valve guide I.D.	IN/EX	6.600 – 6.615 (0.2598 – 0.2604)	6.66 (0.262)
	Guide-to-stem clearance	IN	0.010 – 0.040 (0.0004 – 0.0016)	0.10 (0.004)
		EX	0.050 – 0.080 (0.0020 – 0.0031)	0.12 (0.005)
	Valve seat width		1.0 – 1.2 (0.04 – 0.05)	2.0 (0.08)
	Valve spring free length		39.0 (1.54)	37.5 (1.48)
Camshaft	Valve spring perpendicularity		—	1.5° max.
	Cam height	IN	31.945 – 32.145 (1.2577 – 1.2655)	31.35 (1.234)
		EX	31.666 – 31.866 (1.2467 – 1.2546)	31.35 (1.234)
	Camshaft O.D.		15.966 – 15.984 (0.6286 – 0.6293)	15.92 (0.627)

**SERVICE INFORMATION**

Part	Item		Standard	Service limit
Carburetor	Main jet		BE70R A: #85 BE71F A: #85	—
	Pilot screw opening		BE70R A: 1 turns out BE71F A: 1 turns out	—
	Float height		13.2 (0.52)	—
Spark plug	Gap		0.7 – 0.8 (0.028 – 0.031)	—
Ignition coil	Air gap		0.2 – 0.6 (0.01 – 0.02)	—
Starter motor	Brush length		7.0 (0.28)	3.5 (0.14)
	Mica depth		1.0 (0.04)	0.2 (0.01)
Charge coil	Resistance	1A	3.00 - 4.00 $\Omega$	—
		3A	0.62 - 0.93 $\Omega$	—
		10A	0.16 - 0.24 $\Omega$	—
		18A	0.10 - 0.30 $\Omega$	—
Lamp coil	Resistance	12V - 15 W	1.04 - 1.56 $\Omega$	—
		12V - 25 W	0.30 - 0.46 $\Omega$	—
		12V - 50 W	0.29 - 0.44 $\Omega$	—

**GX340**

Unit: mm (in)

Part	Item		Standard	Service limit
Engine	Maximum speed (at no load)		3,850 $\pm$ 150 min <sup>-1</sup> (rpm)	—
	Idle speed		1,400 $\pm$ 150 min <sup>-1</sup> (rpm)	—
	Cylinder compression		0.51 - 0.69 MPa (5.2 - 7.0 kgf/cm <sup>2</sup> , 74 - 100 psi) / 600 min <sup>-1</sup> (rpm)	—
Cylinder head	Warpage		—	0.10 (0.004)
Cylinder	Sleeve I.D.		88.000 – 88.017 (3.4646 – 3.4652)	88.170 (3.4713)
Piston	Skirt O.D.		87.965 – 87.985 (3.4632 – 3.4640)	87.85(3.459)
	Piston-to-cylinder clearance		0.015 – 0.052 (0.0006 – 0.0020)	0.12 (0.005)
	Piston pin bore I.D.		20.002 – 20.008 (0.7875 – 0.7877)	20.042 (0.7891)
Piston pin	Pin O.D.		19.994 – 20.000 (0.7872 – 0.7874)	19.950 (0.7854)
	Piston pin-to-piston pin bore clearance		0.002 – 0.014 (0.0001 – 0.0006)	0.08 (0.003)
Piston rings	Ring side clearance	Top	0.030 – 0.060 (0.0012 – 0.0024)	0.15 (0.006)
		Second	0.030 – 0.060 (0.0012 – 0.0024)	0.15 (0.006)
	Ring end gap	Top	0.200 – 0.350 (0.0079 – 0.0138)	1.0 (0.04)
		Second	0.350 – 0.500 (0.0138 – 0.0197)	1.0 (0.04)
		Oil (side rail)	0.2 – 0.7 (0.01 – 0.03)	1.0 (0.04)
	Ring width	Top	1.160 – 1.175 (0.0457 – 0.0463)	1.140 (0.0449)
		Second	1.160 – 1.175 (0.0457 – 0.0463)	1.140 (0.0449)
Connecting rod	Small end I.D.		20.005 – 20.020 (0.7876 – 0.7882)	20.07 (0.790)
	Big end side clearance		0.1 – 0.4 (0.004 – 0.016)	1.0 (0.04)
	Big end I.D.		36.025 – 36.039 (1.4183 – 1.4189)	36.07 (1.420)
	Big end oil clearance		0.040 – 0.064 (0.0016 – 0.0025)	0.12 (0.005)
Crankshaft	Crank pin O.D.		35.975 – 35.985 (1.4163 – 1.4167)	35.93 (1.415)
	Crankshaft runout		—	0.1 (0.003)
Cylinder barrel (Crankcase)	Camshaft bearing I.D.		16.000 – 16.018 (0.6299 – 0.6306)	16.05 (0.632)
Crankcase cover	Camshaft bearing I.D.		16.000 – 16.018 (0.6299 – 0.6306)	16.05 (0.632)

SERVICE INFORMATION

Part	Item		Standard	Service limit
Valves	Valve clearance	IN	0.15 ± 0.02	—
		EX	0.20 ± 0.02	—
	Valve stem O.D.	IN	6.575 – 6.590 (0.2588 – 0.2594)	6.44 (0.254)
		EX	6.535 – 6.550 (0.2572 – 0.2578)	6.40 (0.252)
	Valve guide I.D.	IN/EX	6.600 – 6.615 (0.2598 – 0.2604)	6.66 (0.262)
	Guide-to-stem clearance	IN	0.010 – 0.040 (0.0004 – 0.0016)	0.10 (0.004)
		EX	0.050 – 0.080 (0.0020 – 0.0031)	0.12 (0.005)
	Valve seat width		1.0 – 1.2 (0.04 – 0.05)	2.0 (0.08)
Camshaft	Cam height		31.945 – 32.145 (1.2577 – 1.2655)	31.35 (1.234)
			31.666 – 31.866 (1.2467 – 1.2546)	31.35 (1.234)
	Camshaft O.D.		15.966 – 15.984 (0.6286 – 0.6293)	15.92 (0.627)
Carburetor	Main jet		BE80N A: #98 BE80M A: #98 BE80P A: #98	—
	Pilot screw opening		BE80N A: 1 - 3/4 turns out BE80M A: 1 - 3/4 turns out BE80P A: 1 - 3/4 turns out	—
	Float height		13.2 (0.52)	—
Spark plug	Gap		0.7 – 0.8 (0.028 – 0.031)	—
Ignition coil	Air gap		0.2 – 0.6 (0.01 – 0.02)	—
Starter motor	Brush length		7.0 (0.28)	3.5 (0.14)
	Mica depth		1.0 (0.04)	0.2 (0.01)
Charge coil	Resistance	1A	3.00 - 4.00 Ω	—
		3A	0.62 - 0.93 Ω	—
		10A	0.16 - 0.24 Ω	—
		18A	0.10 - 0.30 Ω	—
Lamp coil	Resistance	12V - 15 W	1.04 - 1.56 Ω	—
		12V - 25 W	0.30 - 0.46 Ω	—
		12V - 50 W	0.29 - 0.44 Ω	—

TORQUE VALUES

ENGINE TORQUE VALUES

Item	Tread Dia. (mm)	Torque values		
		N·m	kgf·m	lbf·ft
Flywheel nut (GX240)	M16 x 1.5 (Special nut)	128	13.1	94
Flywheel nut (GX340)	M16 x 1.5 (Special nut)	170	17.3	125

LUBRICATION & SEAL POINT

Location	Material	Remarks
Drive sprocket and P. T. O. shaft	Engine oil	

## SERVICE INFORMATION

### HARNESS AND TUBE ROUTING

FUEL TUBE

