

SERVICE MANUAL

SUBARU 360 SERIES



ENGINE SECTION

 ***FUJI HEAVY INDUSTRIES LTD.***

TOKYO JAPAN

FOREWORD

This service manual has been prepared as reference for effective service and maintenance of the engine for Subaru 360 Sedan, Subaru 360 Custom, Subaru 360 Van and Subaru 360 Truck.

Please utilize this manual fully to ensure complete maintenance work for satisfying our customers by keeping their vehicles in the best condition.

(For information on the body, please refer to the "Service Manual - Body Section".)

When it is necessary to replace parts during maintenance, be sure to use genuine Subaru parts.

1969

FUJI HEAVY INDUSTRIES LTD.

CONTENTS

CHAPTER 1: MAIN SPECIFICATIONS AND PERFORMANCE	1
CHAPTER 2: MOUNTING AND DISMOUNTING ENGINE	2
CHAPTER 3: ENGINE AND TRANSMISSION	3
CHAPTER 4: ENGINE ANCILLARY PARTS	4
CHAPTER 5: ELECTRICAL EQUIPMENT	5
CHAPTER 6: TIGHTENING TORQUE	6
CHAPTER 7: SPECIAL TOOL	7
SUPPLEMENT	

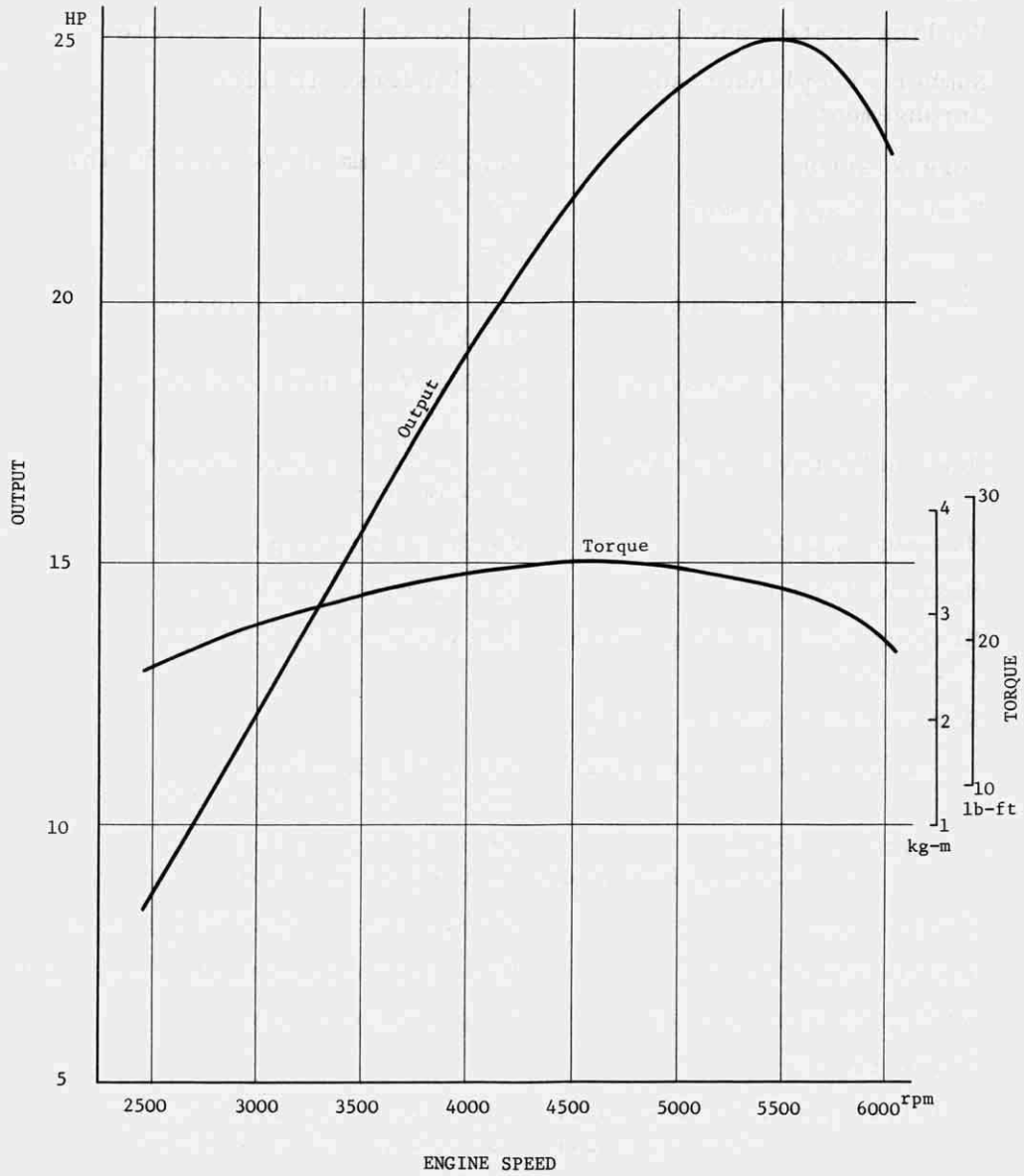
CHAPTER 1 : MAIN SPECIFICATIONS AND PERFORMANCE

1-1	ENGINE PERFORMANCE CURVE	1-1
1-2	MAIN SPECIFICATIONS	1-2



1 - 1 ENGINE PERFORMANCE CURVE

1 - 2 MAIN SPECIFICATIONS



1 - 2 MAIN SPECIFICATIONS

ENGINE PERFORMANCE CURVE

ENGINE

Model	EK32
Type	Gasoline engine
Cooling system and cycle	Forced air-cooled; 2-cycle
Number of cylinder and arrangement	2 cylinders, in line
Bore x stroke	61.5 x 60 mm (2.42 x 2.36 in)
Piston displacement	356 cc
Compression ratio	6.7
Compression pressure	9.1 kg/cm ² (129.4 lb/in ²) at 300 rpm
Max. explosion pressure	25.0 kg/cm ² (355.6 lb/in ²) at 1500 rpm
Mean effective pressure	6.2 kg/cm ² (88.2 lb/in ²) at 4500 rpm
Maximum output	25 HP at 5500 rpm
Maximum torque	3.5 kg-m (25.3 lb-ft)
Minimum fuel consumption at full load	300 gr/hp-h at 5200 rpm
Dimensions & weight (dry)	
Length x width x height	634 x 618 x 476 mm (25.0 x 24.3 x 18.7 in)
Weight : SEDAN:	78.3 kg (172.3 lb)
CUSTOM, TRUCK, VAN:	78.8 kg (173.4 lb)
Piston type	Single action cylinder piston
Piston material	High silicon aluminum alloy cast
Number of piston rings	3 (pressure rings)
Valve timing	
Intake port:Opening angle	53° before top dead center
Closing angle	53° after top dead center
Exhaust port:Opening angle	68° before bottom dead center
Closing angle	68° after bottom dead center

IGNITION SYSTEM

Firing order	1-2
Ignition timing	13° before top dead center at 2000 rpm

Ignition coil type	HITACHI 51504 - 1100
Distributor	
Type : Sedan, Custom	NIPPON DENSO 29100-136
Truck, Van	HITACHI D-203
Firing angle advancer	Automatic centrifugal
Spark plug	
Type	NIPPON TOKUSHU TOGYO (NGK) B7H
Thread size	14 mm
Spark gap	0.7 mm (0.0276 in)
FUEL SYSTEM	
Carburetor	
Type and number	HITACHI Solex Type HAB28, 1
Air flow-direction	Side draft
Air cleaner type and number	Oil wet type paper filter, 1
Fuel tank capacity	
Sedan	25 l, 6.6 US gal, 5.5 Imp. gal
Custom	20 l, 5.3 US gal, 4.4 Imp. gal
Truck, Van	30 l, 8.0 US gal, 6.5 Imp. gal
LUBRICATION SYSTEM	
Lubrication method	Forced lubrication
Oil pump type	Plunger pump
Oil tank capacity	2.5 l (2.6 US qt, 2.2 Imp qt)
BATTERY	
Type and number	YUASA 12N24-3, 1
Voltage and capacity	12 V, 26 AH
Specific gravity	1.280 (when fully charged)
GENERATOR	
Type	NIPPON DENSO 27000 - 116
Generating method	Constant voltage
Voltage and capacity	12 V, 200 W
STARTER MOTOR	
Type	HITACHI S108
Voltage and output	12 V, 600 W

REGULATOR
 Type NIPPON DENSO 26000 - 108

POWER TRANSMISSION
 Clutch
 Type Dry single plate type
 Clutch plate(outside dia. x inside dia. x thickness) 160 x 110 x 3.1 mm
 (6.30 x 4.33 x 0.12 in)
 Facing area 212 cm² (32.86 in²)

Primary reduction gear
 Type Helical gear
 Reduction ratio 1.605

Transmission
 Type 4-forward & 1-reverse,
 synchromesh on 2nd, 3rd & 4th(OT)
 Gear ratio : 4th (OT) 0.806
 3rd 1.000
 2nd 1.601
 1st 3.130
 Reverse 4.248

Final reduction gear
 Type Helical gear
 Reduction ratio : Sedan 3.667
 Custom 3.667
 Truck 4.188
 Van 3.882

Amount of gear oil 1.6 ℓ (3.4 US pt., 2.8 Imp. pt.)

DIFFERENTIAL
 Differential case Separate type
 Differential gear type and number Bevel gear, 2.