

# SHOP MANUAL

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**D40A,P-1**  
**D45A,P,S-1**

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**BULLDOZERS**  
**DOZER SHOVEL**

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MACHINE MODEL & SERIAL NO.

<b>D45A-1</b>	<b>1504</b>	and up
<b>D45P-1</b>	<b>1501</b>	and up
<b>D45S-1</b>	<b>1501</b>	and up
<b>D40A-1</b>	<b>1501</b>	and up
<b>D40P-1</b>	<b>1501</b>	and up



# GENERAL DESCRIPTION

- 01 INTRODUCTION
- 02 GENERAL INSTRUCTIONS

GENERAL  
DESCRIPTION

## ENGINE

- 03 CONSTRUCTION AND FUNCTION, TESTING  
AND ADJUSTING, TROUBLE SHOOTING
- 04 DISASSEMBLY AND ASSEMBLY
- 05 STANDARD FOR MAINTENANCE

ENGINE

## ELECTRICAL SYSTEM

- 06 ELECTRICAL SYSTEM

ELECTRICAL  
SYSTEM

## POWER TRAIN

- 07 CONSTRUCTION AND FUNCTION, TESTING  
AND ADJUSTING, TROUBLE SHOOTING
- 08 DISASSEMBLY AND ASSEMBLY
- 09 STANDARD FOR MAINTENANCE

POWER TRAIN

## HYDRAULIC CONTROL

- 10 CONSTRUCTION AND FUNCTION, TESTING  
AND ADJUSTING, TROUBLE SHOOTING
- 11 DISASSEMBLY AND ASSEMBLY
- 12 STANDARD FOR MAINTENANCE

HYDRAULIC  
CONTROL

## GEAR PUMP

- 13 GEAR PUMP

GEAR PUMP

**SERVICE STANDARDS**

A sectional drawing of the machine part is prepared and each pertinent part requiring service standards is described by the number in the drawing and in the Table.

No.	Check Item	Criteria				Remedy
		Basic Size	Tolerance		Standard Clearance	
Shaft	Hole					

**MEANING OF SPECIAL WORDS**

**Standard Clearance**

This is range of clearance specified for two new parts assembled together. When the machine has been reconditioned, every clearance must be adjusted to its standard clearance.

**Service Limit**

This is the limit of the size of a part restricting use of the worn or distorted part in excess of this limit. All parts exceeding the repair limit must be replaced or repaired, whichever is specified.

**Clearance Limit**

This is the limit of clearance between parts restricting use of the worn parts in excess of this limit. All parts exceeding the clearance limit must be replaced or repaired, whichever is specified.

**Turning Limit**

This limit is applied only to the track link pitches. As long as any link remains within the turning limit, the link can be reconditioned by turning over its bushing and pin.

# SHOP MANUAL

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## **D40,45-1**

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### **I INTRODUCTION**

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# GENERAL

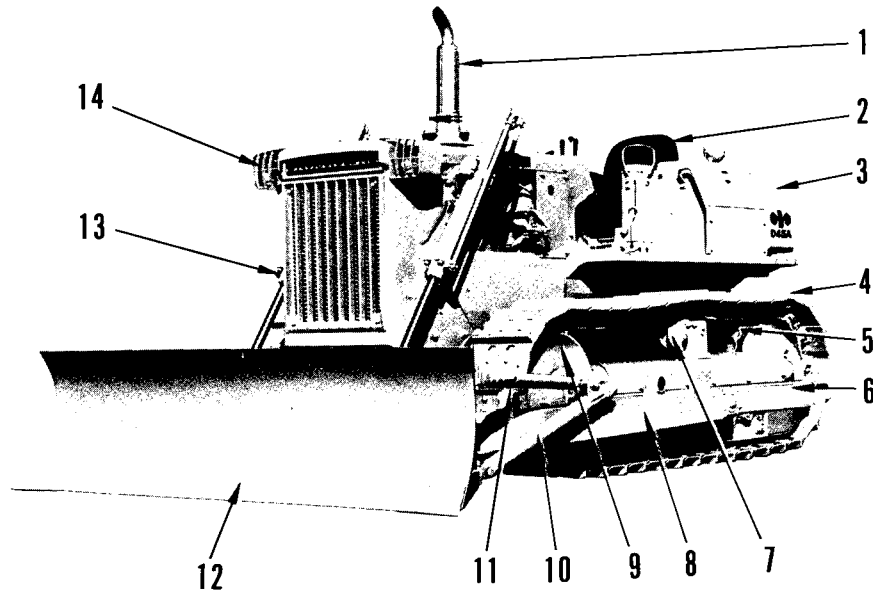
General views . . . . .	01 - 3
Specifications . . . . .	01 - 6
General assembly drawing . . . . .	01 - 7
Engine general view . . . . .	01-10
Engine assembly drawing . . . . .	01-13
Engine performance curve . . . . .	01-14
Weight table . . . . .	01-18
Serial number locations . . . . .	01-22
Oil and water capacities . . . . .	01-24





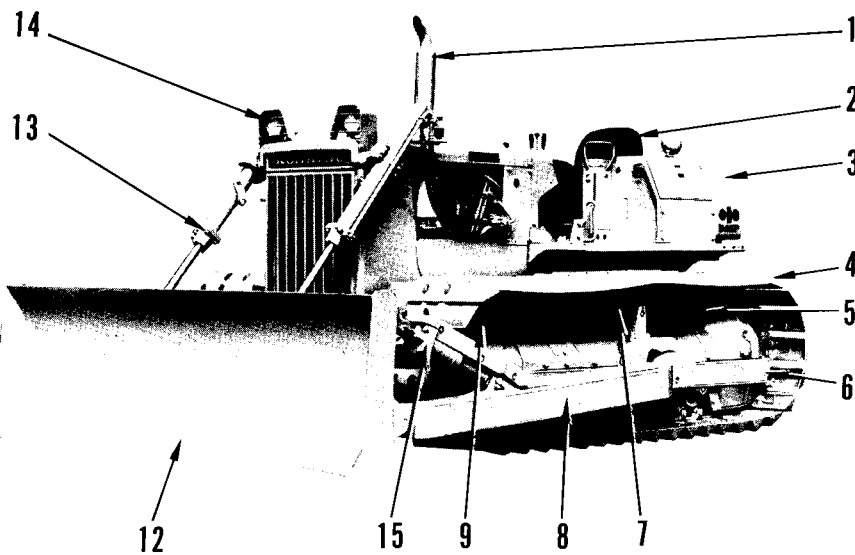
# GENERAL VIEWS

## D45A



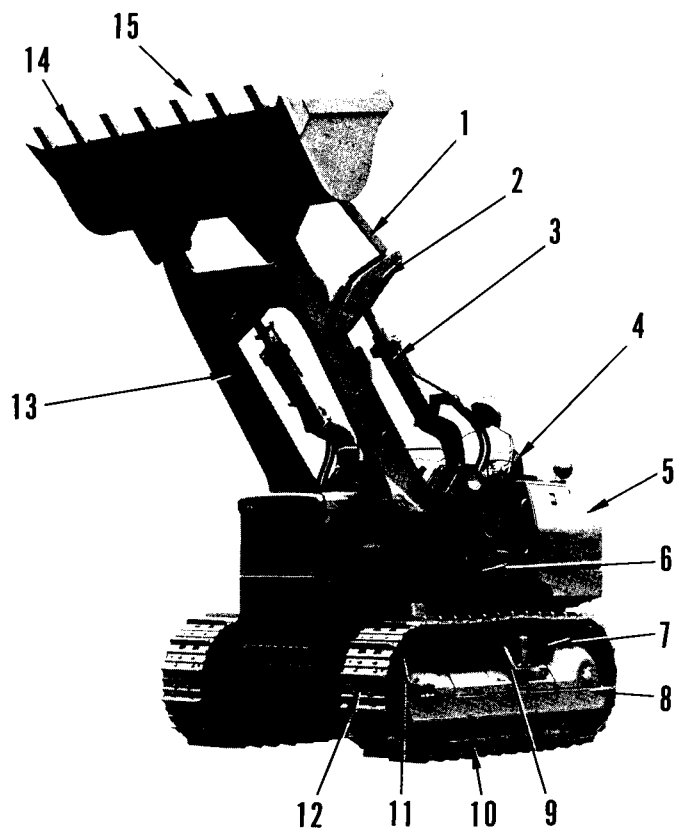
- 1. Exhaust pipe
- 2. Operator seat
- 3. Fuel tank
- 4. Track shoe
- 5. Sprocket
- 6. Track frame
- 7. Carrier roller
- 8. Frame
- 9. Idler
- 10. Arm
- 11. Brace (D45A)
- 12. Blade
- 13. Blade lift cylinder
- 14. Headlight

## D45P



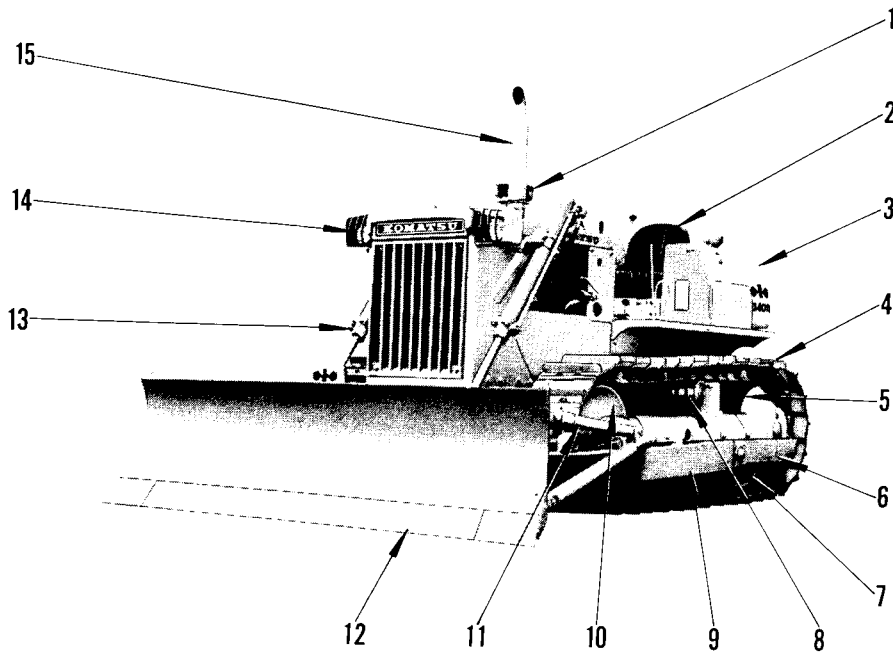
- 1. Exhaust pipe
- 2. Operator seat
- 3. Fuel tank
- 4. Track shoe
- 5. Sprocket
- 6. Track frame
- 7. Carrier roller
- 8. Frame
- 9. Idler
- 10. Arm
- 11. Brace (D45A)
- 12. Blade
- 13. Blade lift cylinder
- 14. Headlight
- 15. Tilt-cylinder (D45P)

D45S



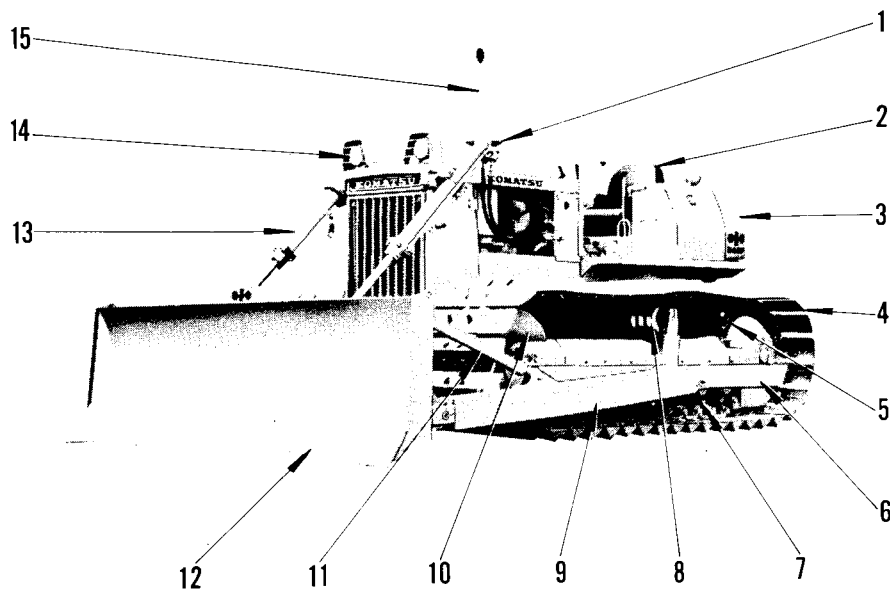
- 1. Tilt rod
- 2. Tilt lever
- 3. Dump cylinder
- 4. Operator Seat
- 5. Fuel tank
- 6. Lift cylinder
- 7. Sprocket
- 8. Track frame
- 9. Carrier roller
- 10. Track roller
- 11. Idler
- 12. Track shoe
- 13. Lift arm
- 14. Tooth
- 15. Bucket

D40A-1



- 1. Pre-cleaner
- 2. Operator's seat
- 3. Fuel tank
- 4. Track shoe
- 5. Sprocket
- 6. Track frame
- 7. Track roller
- 8. Carrier roller
- 9. Frame
- 10. Idler

D40P-1



- 11. Brace
- 12. Blade
- 13. Blade lift cylinder
- 14. Head lamp
- 15. Exhaust pipe

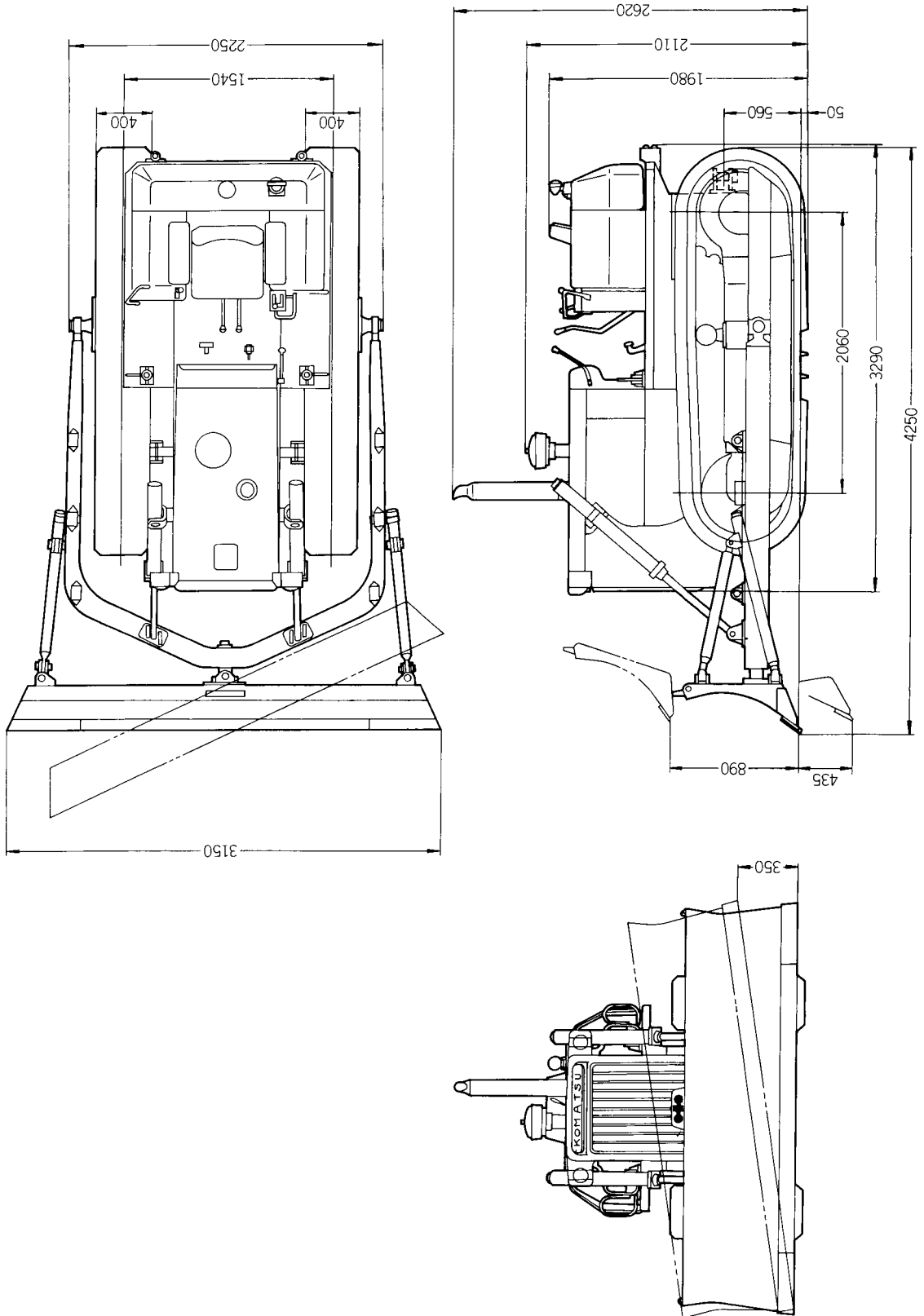
## SPECIFICATIONS

### • Body

Machine model		D45A-1	D45P-1	D45S-1	D40A-1	D40P-1		
Serial numbers		1501~	1501~	1501~	1501~	1501~		
Operating weight (kg)		9550	10500	10990	9320	10200		
DIMENSIONS (mm)	Overall length	without blade	3290	3590	—	3290	3590	
		with blade	4250	4665	—	4225	4665	
		without bucket	—	—	1890	—	—	
		with bucket	—	—	4925	—	—	
	Overall width	without blade	1940	2480	—	1940	2480	
		with blade	3150	3000	—	3150	3000	
		without bucket	—	—	1945	—	—	
		with bucket	—	—	2130	—	—	
	Overall height at transportation	to top of exhaust pipe	2620	2610	2775	2620	2610	
		at transportation	2110	2005	2175	2110	2005	
	Track gauge		1540	1760	1540	1540	1760	
	Length of track on ground		2060	2590	2060	2060	2590	
Ground clearance		360	430	360	360	430		
PERFORMANCE	Min. turning radius (m)		2.5	3.0	2.5	2.5	3.0	
	TRAVEL SPEED	FORWARD	1st (km/h)	0~3.4	0~3.4	0~3.1	2.5	2.5
			2nd (km/h)	0~5.7	0~5.7	0~5.3	3.3	3.3
			3rd (km/h)	0~9.2	0~9.0	0~8.5	5.2	5.2
			4th (km/h)	—	—	—	9.5	9.5
		REVERSE	1st (km/h)	0~4.1	0~4.1	0~3.7	3.3	3.3
			2nd (km/h)	0~7.0	0~6.9	0~6.4	4.9	4.9
			3rd (km/h)	0~11.1	0~10.9	0~10.1	7.7	7.7

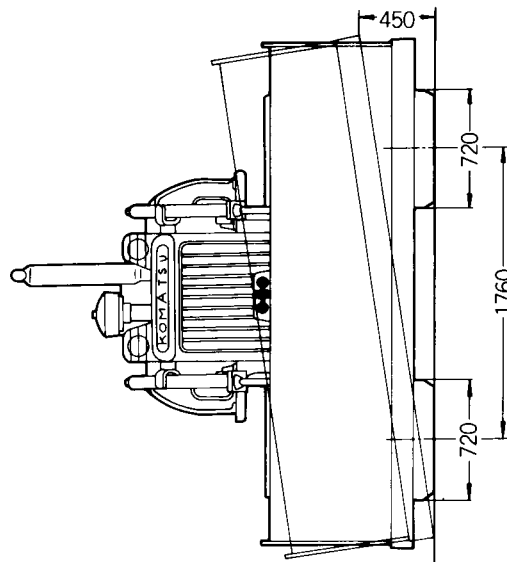
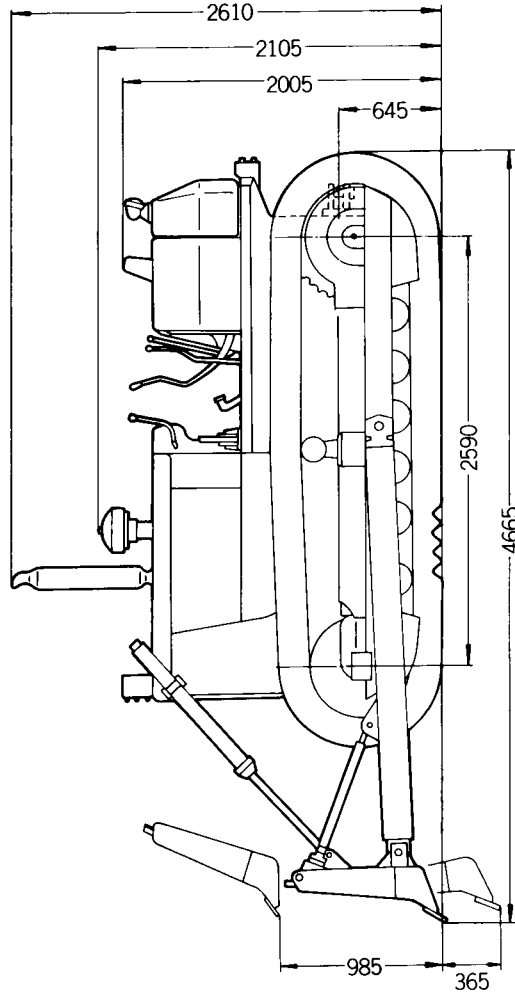
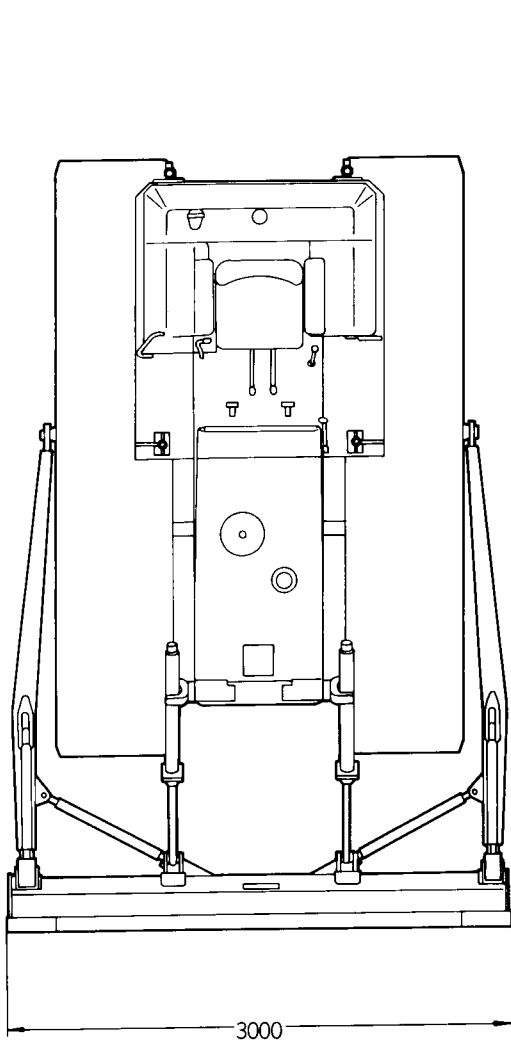
# GENERAL ASSEMBLY DRAWING

D40A-1  
D45A-1

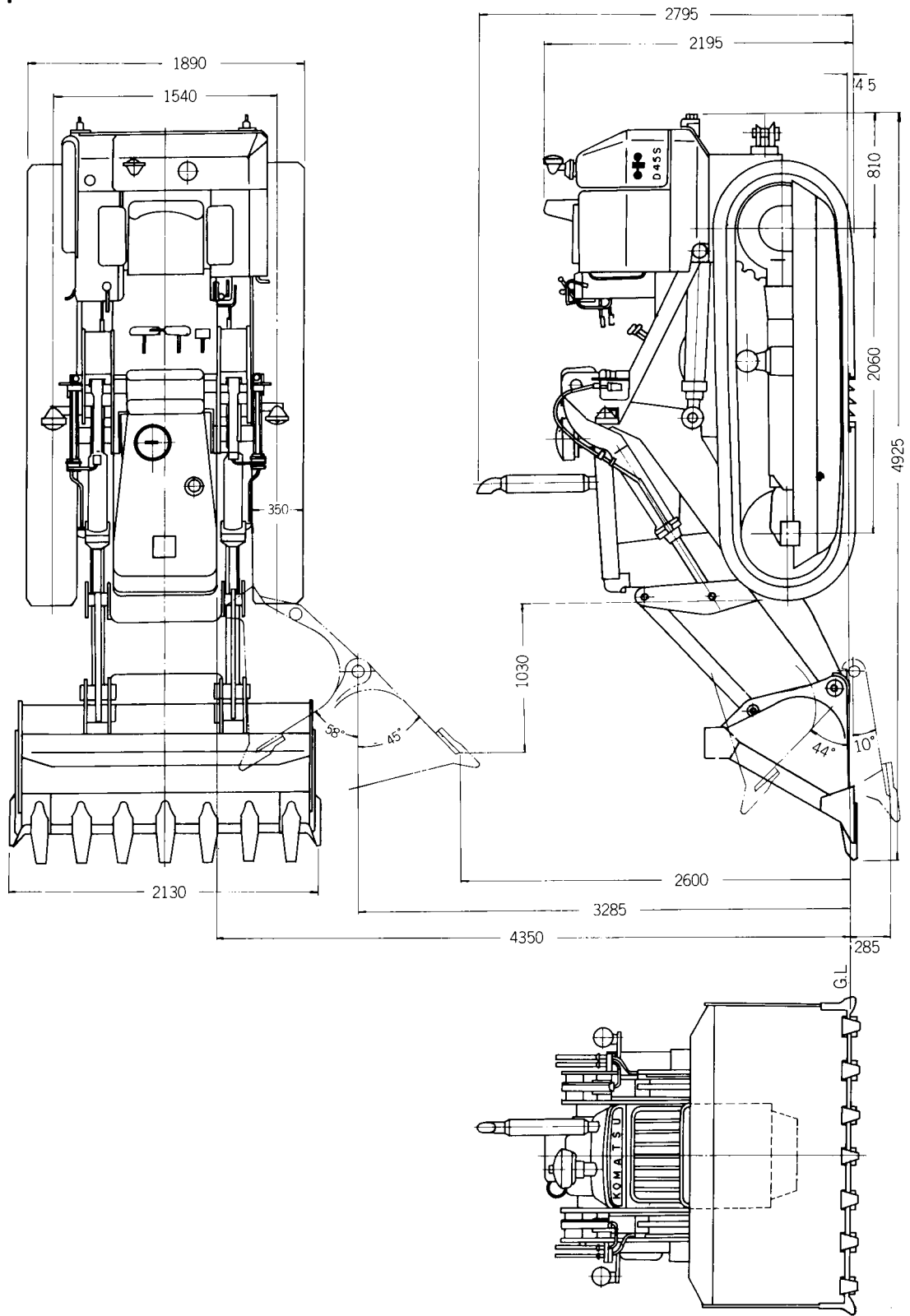


01F001

D40P-1  
D45P-1

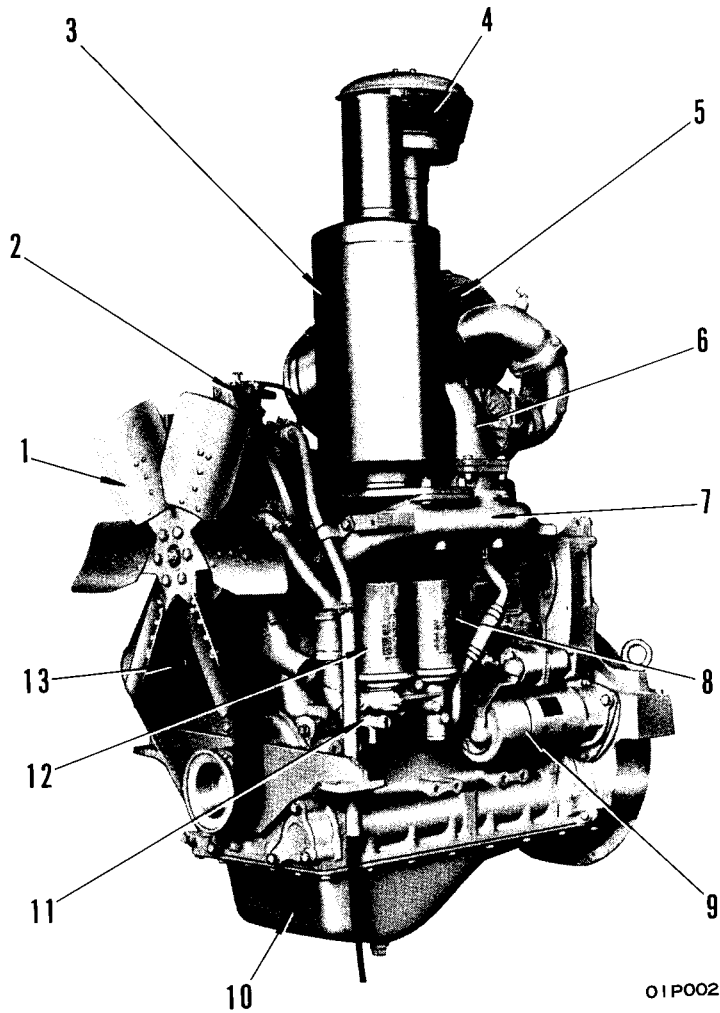


D45S-1



**ENGINE GENERAL VIEW**

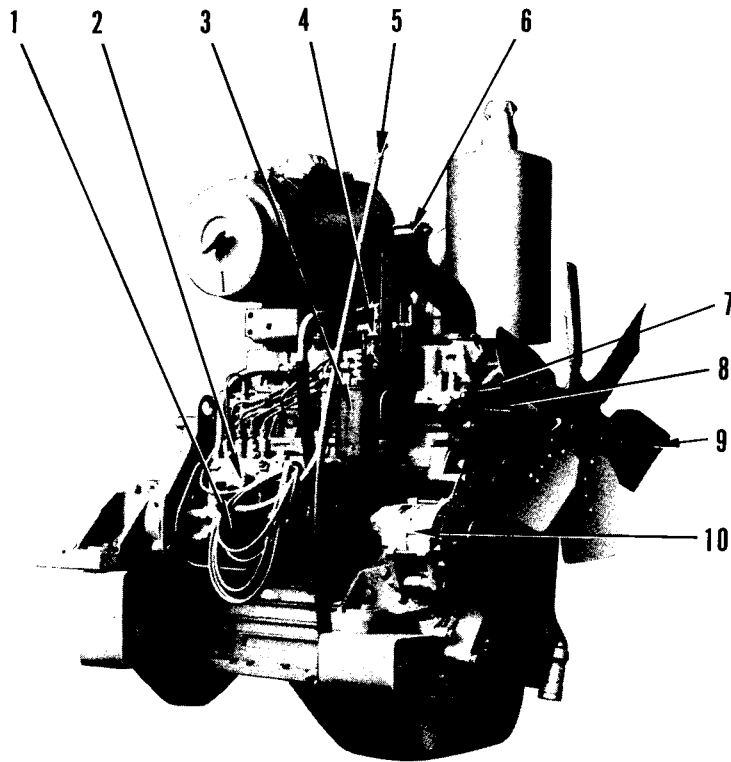
S4D105-1



- |                     |                   |
|---------------------|-------------------|
| 1. Fan              | 8. Oil cooler     |
| 2. Thermostart tank | 9. Starting motor |
| 3. Exhaust pipe     | 10. Oil pan       |
| 4. Pre-cleaner      | 11. Drain cock    |
| 5. Air-cleaner      | 12. Oil filter    |
| 6. Turbocharger     | 13. Alternator    |
| 7. Exhaust manifold |                   |

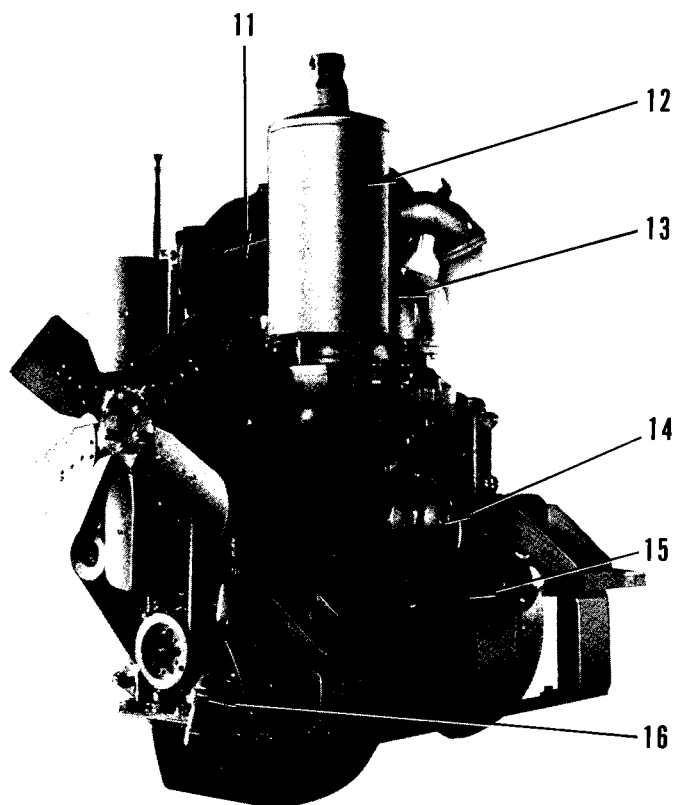


S4D105-3

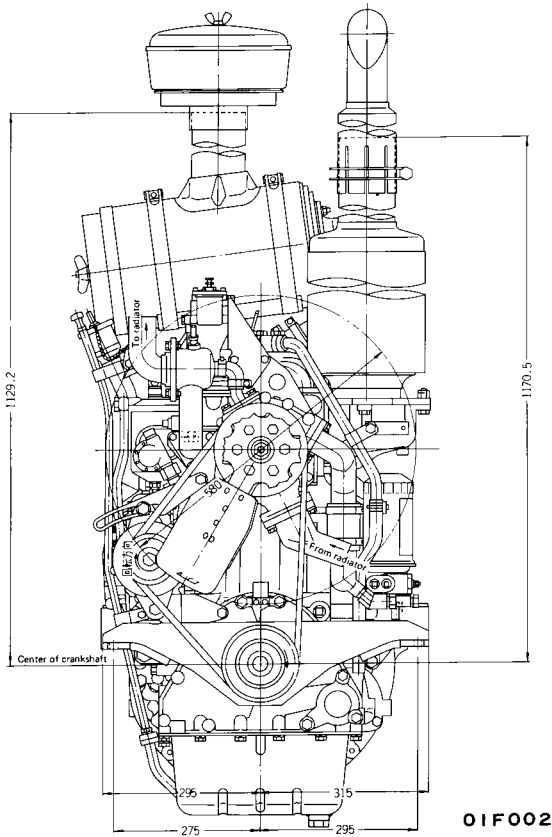


- 1. Feed pump
- 2. Fuel injection pump
- 3. Fuel filter
- 4. Magnet valve
- 5. Oil level gauge
- 6. Oil filler
- 7. Thermostat housing
- 8. Water pump
- 9. Fan
- 10. Alternator

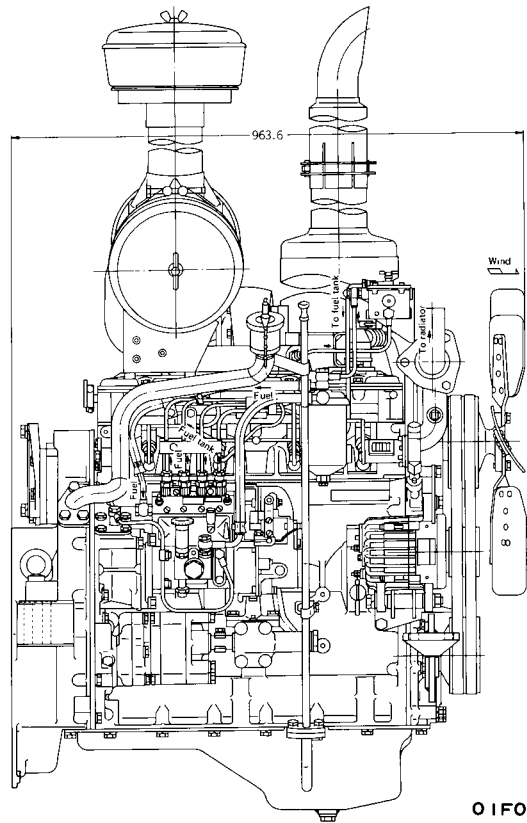
- 11. Muffler
- 12. Oil filter
- 13. Turbocharger
- 14. Oil filter
- 15. Starter
- 16. Oil pump cover



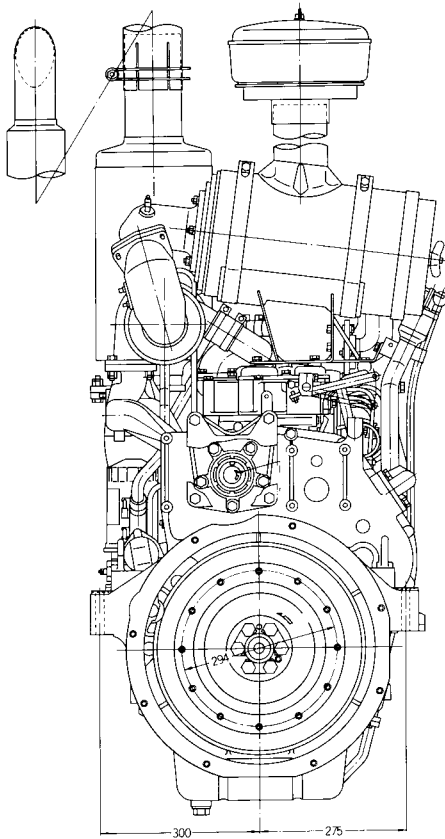
# ENGINE ASSEMBLY DRAWING (S4D105-1)



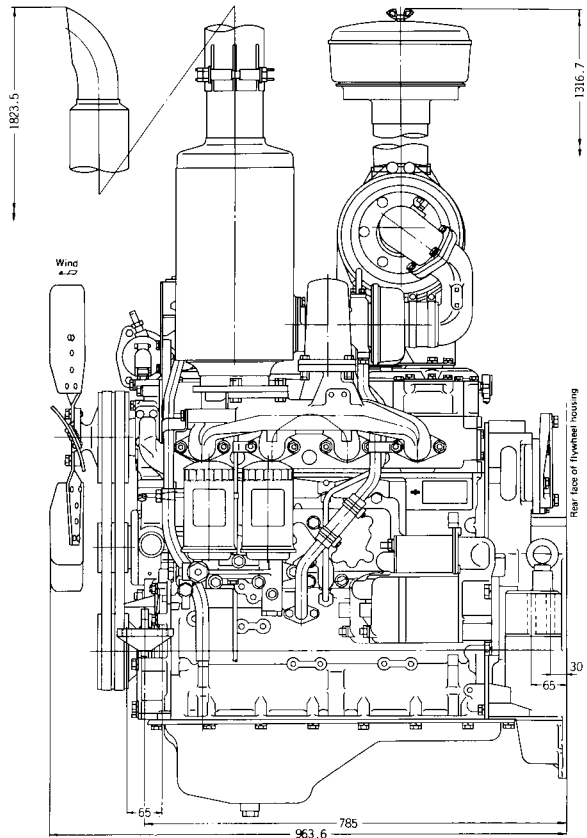
O1F002



O1F004

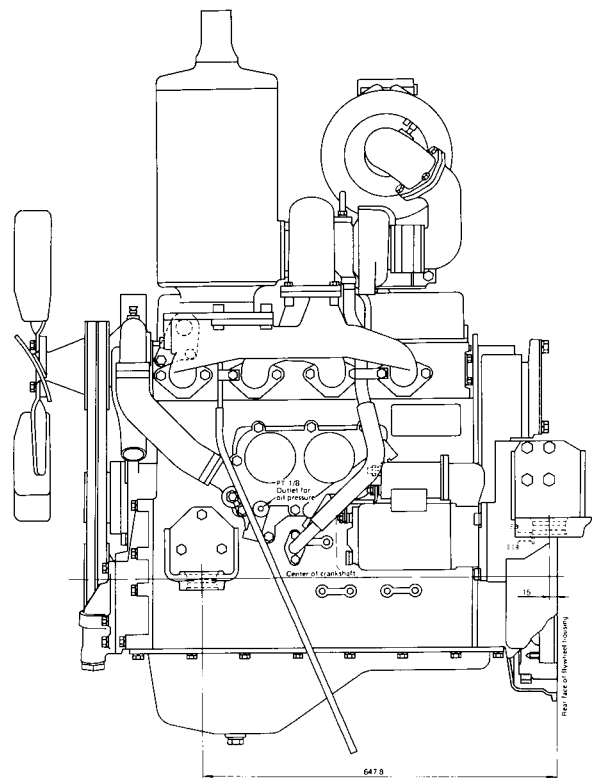
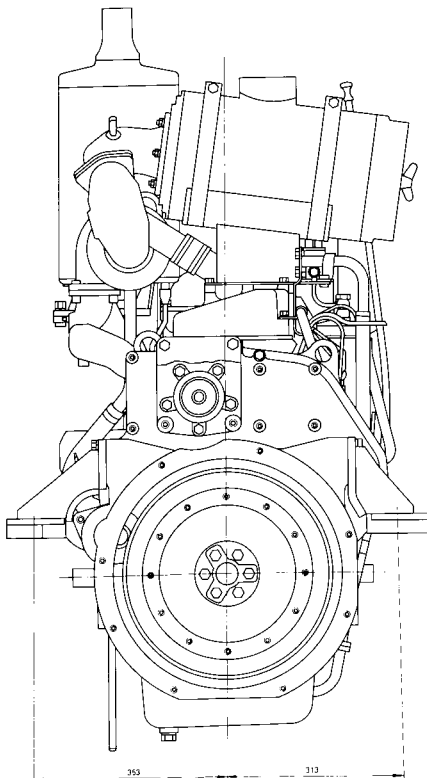
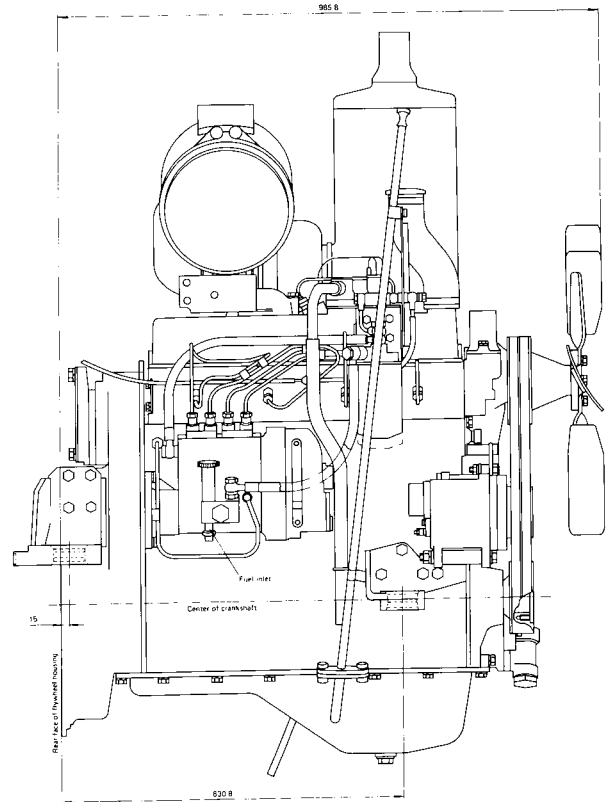
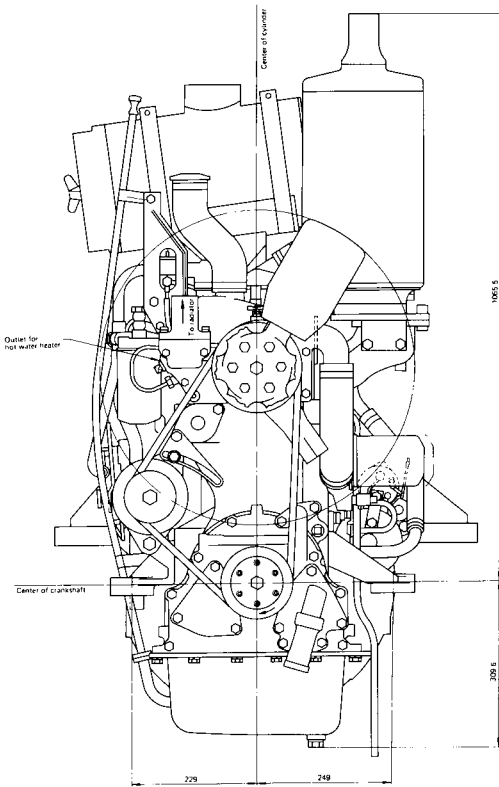


O1F003



O1F005

S4D105-3



## ENGINE PERFORMANCE CURVE

### S4D105-1 (D45)

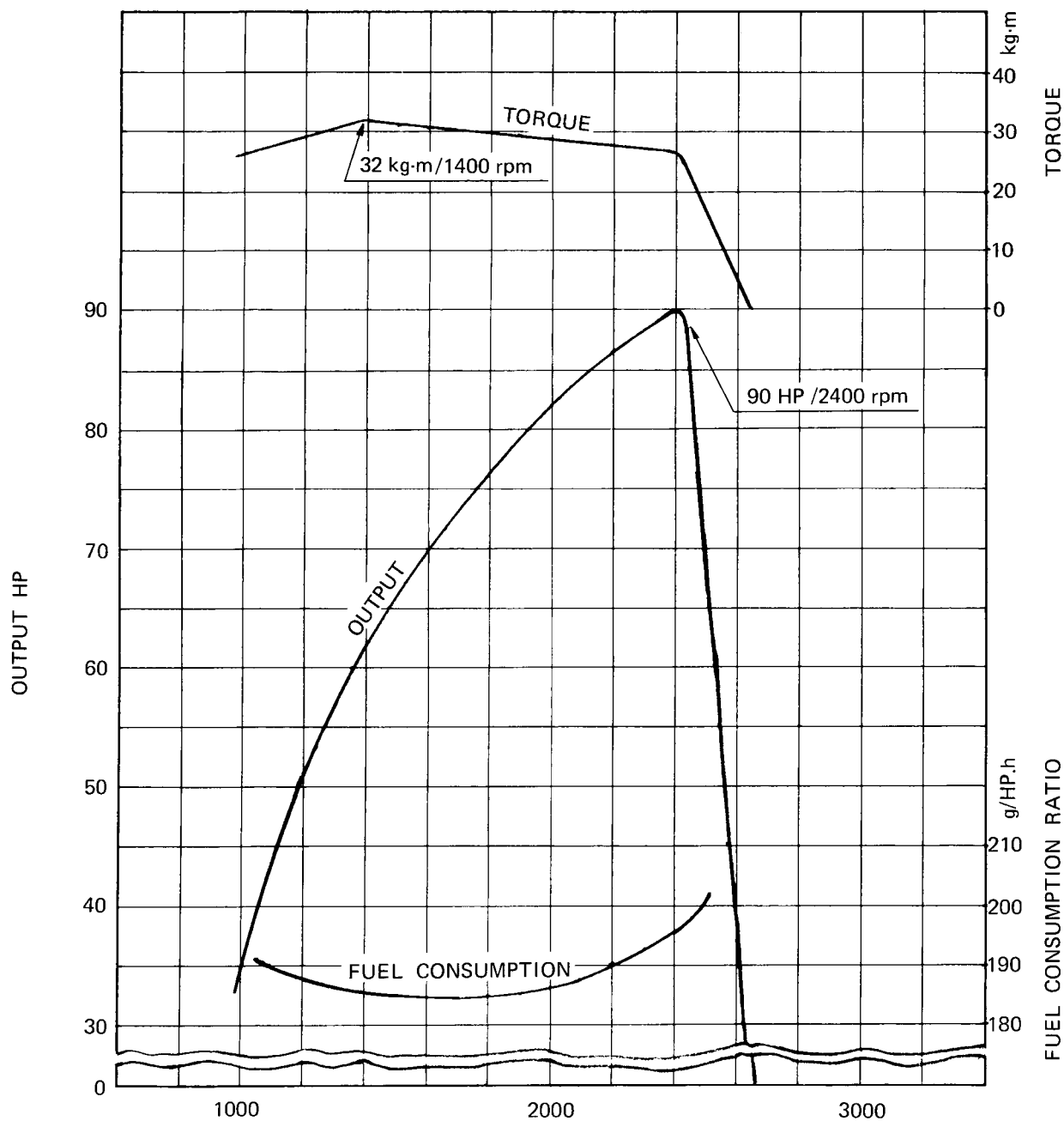
ENGINE MODEL: S4D105-1      APPLICATION: D45APS-1

BORE: 105 mm

NO. OF CYLINDERS: 4

STROKE: 115 mm

PISTON DISPLACEMENT: 3980 cc



1. This performance is applied under conditions of 20°C (Ambient temperature) 760 mmHg (Atmospheric pressure) and 11.4 mmHg (Vapor pressure).
2. The engine equipment includes fan, air cleaner, water pump, lubricating oil pump, fuel pump, generator and muffler.