2. SPECIFICATIONS

2.1 GENERAL SPECIFICATIONS

Operating Weight	770 kg (1,697 lb)
Major Component Weights Upper Structure, without Front Attachment, with Counterweight	317 kg (699 lb)
Lower Structure, below Swing Bearing	166 kg (366 lb)
Front Assembly	133 kg (293 lb)
Counter Weight	30 kg (66 lb)
Boom	36 kg (79 lb)
Arm	15 kg (33 lb)
Bucket	14 kg (28 lb)
Blade	42 kg (94 lb)
Boom Cylinder(each)	8 kg (18 lb)
Arm Cylinder	9 kg (20 lb)
Bucker Cylinder	8 kg (18 lb)
Dozer Cylinder	5 kg (11 lb)
Transport Dimensions	
Overall Shipping Length	2,800 mm(9´2˝)
Overall Shipping Width	810 mm(2´7˝)
Overall Shipping Height	1,520 mm(4´11˝)
Track Shipping Length	906 mm(3´0˝)
Major Component Dimensions	
Boom Length	1,345 mm(53˝)
Arm Length	660 mm(26˝)
Dozer Blade(W × H)	810 mm ×195 mm(2´7˝ × 7 1/2˝)
Shoe Width	180 mm(7.09 in)
Digging Force Bucket Cylinder Arm Cylinder	 820 metric tons 720 metric tons
Digging Capacity	0.82 Ton
Towing Capacity	0.57 Ton
Fuel Tank Capacity	7.5 ℓ(1.98 gal)
Hydraulic Tank Capacity	12 ℓ(3.14 gal)
Bucket Capacity(CECE Heaped)	0.02m^3(0.03 yd^3)
Excavator Ground Pressure	 0.20 kg/cm^2(2.84 psi)
Gradeability	30°
Boom Swing Angle (R/L)	90°/90°

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3. HYDRAULIC SYSTEM OPERATION

- **HYDRAULIC CIRCUIT DIAGRAM**

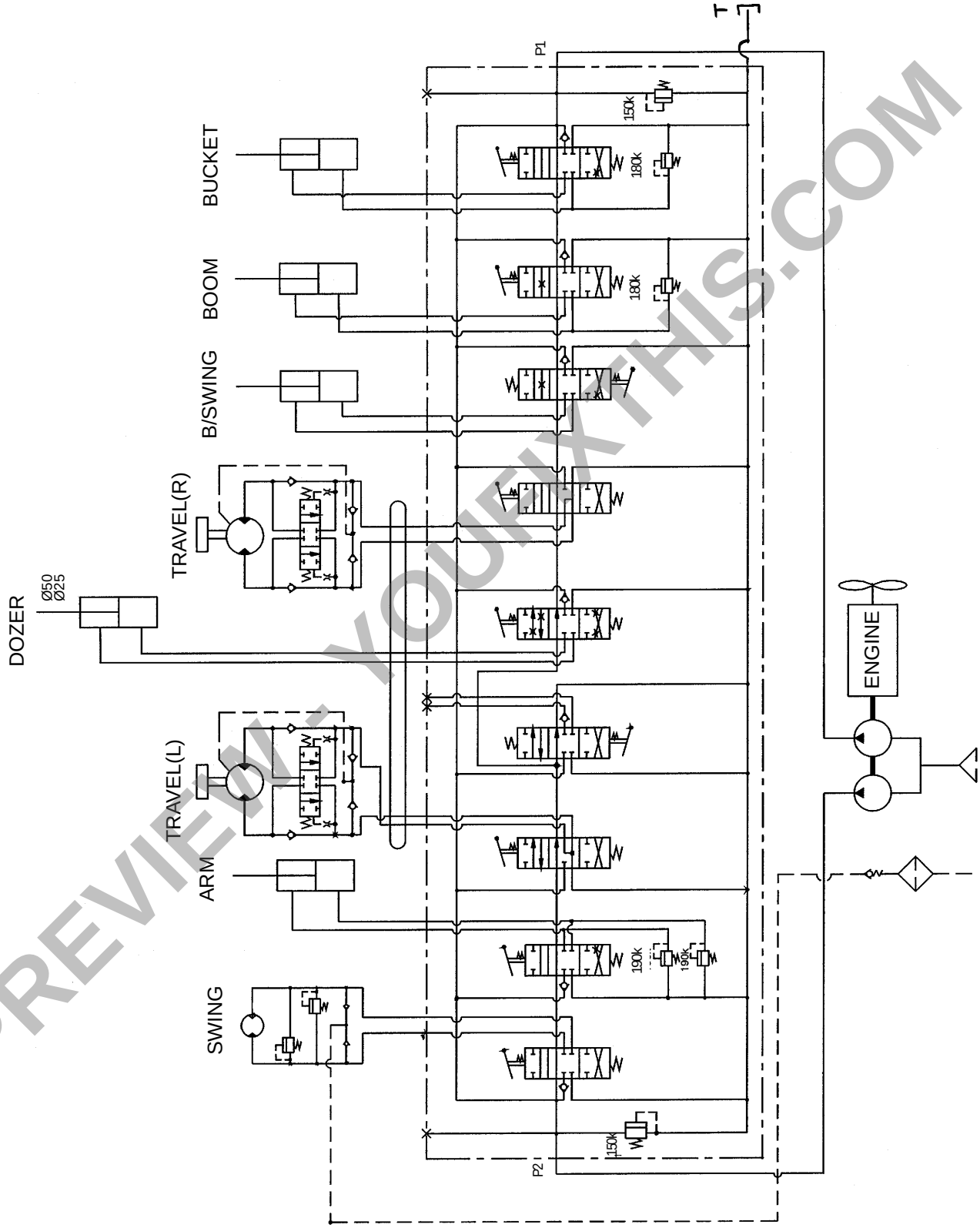

Figure 3-1

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5.2 DISASSEMBLY

1. Detach and separate hydraulic lines and linkage from control valve. See Figure 5-1.

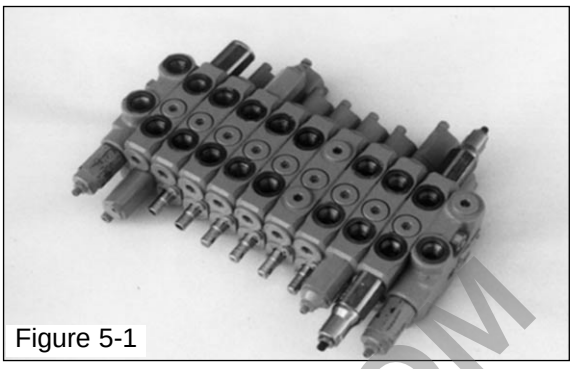
Figure 5-1

2. Loosen and remove plugs from cylinder and tank ports. See Figure 5-2.

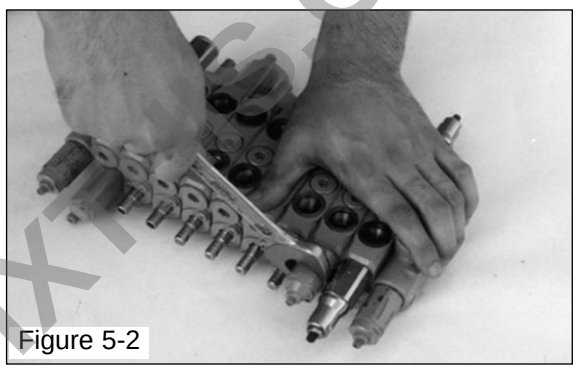
Figure 5-2

3. Remove accessory valves (overload relief, combination relief and anti-cavitation valves). See Figure 5-3.

NOTE : *Replace accessory valves when defective, and use new O-rings when reusing valves.*

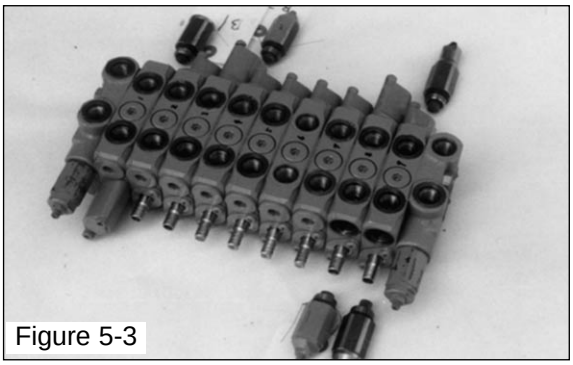
Figure 5-3

4. Remove plugs from valve body. See Figure 5-4.

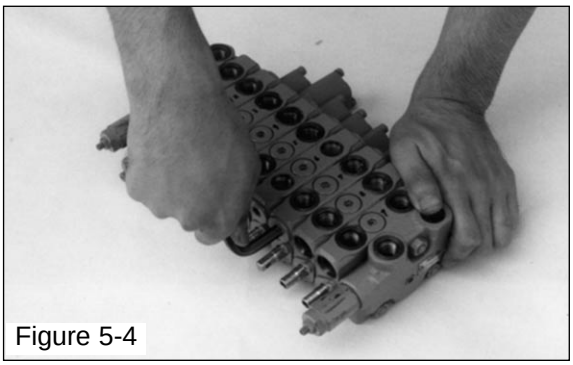
Figure 5-4

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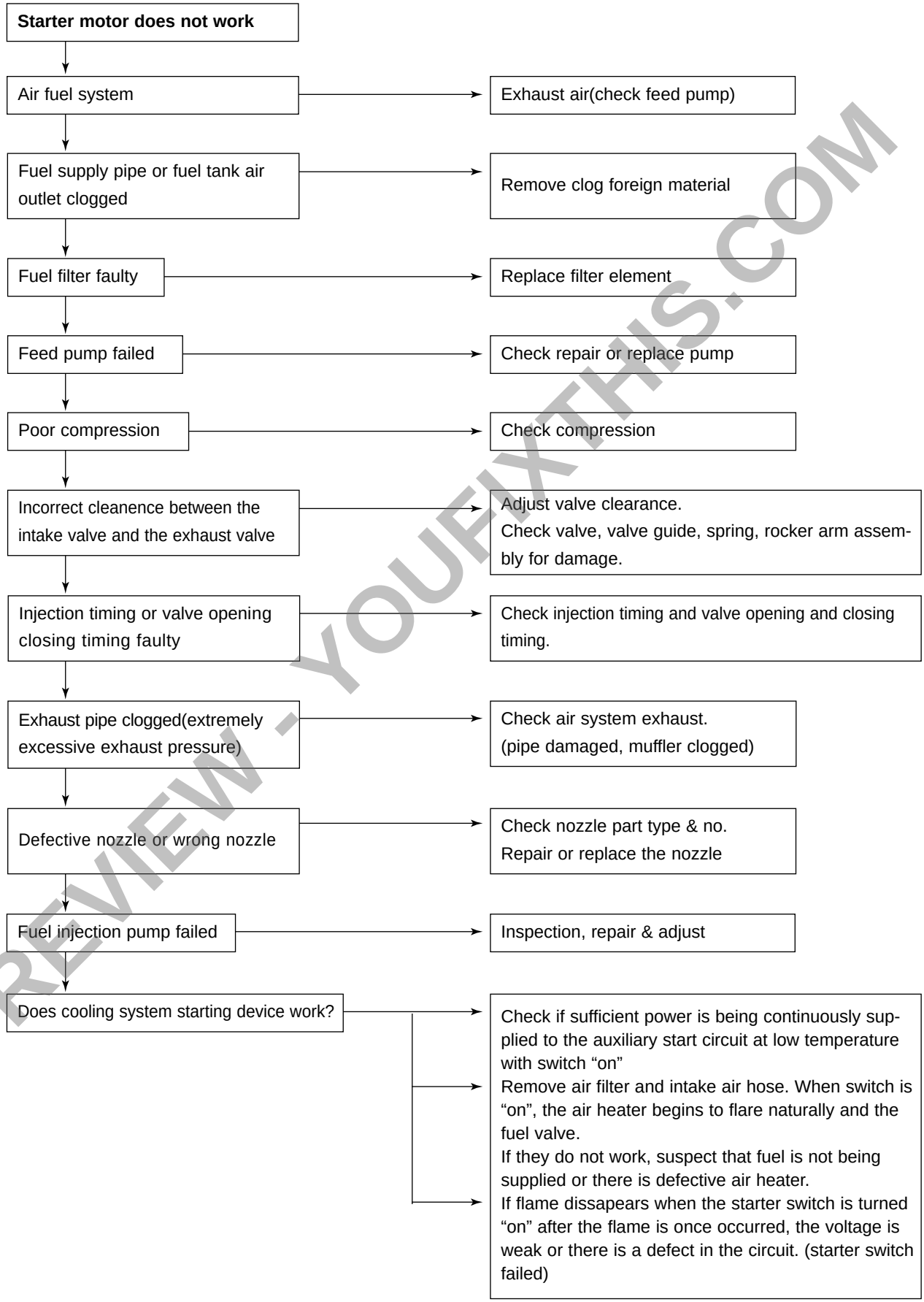
11. TROUBLESHOOTING

11.1 ENGINE



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10. MAINTENANCE

10.1 MAINTENANCE INTERVALS

1. Daily or Every 10 Operating Hours

- Grease Fittings
- Lubricate governor link
- Check fuel lever
- Drain water and sediment from hydraulic oil reservoir
- Check engine oil refill as required
- Check cooling system and refill as required
- Clean exterior of radiator and check for damaged fins
- Check engine fan belt for cracks, wear and correct tension
- Clean air cleaner dust cap
- Check for leaks in the lubrication system
- Check for leaks in the hydraulic system
- Check for leaks in the fuel system
- Inspect for any loose or missing nuts or bolts
- Check for loose damaged electrical wiring and connections
- Inspect bucket teeth and side cutter for signs of wear
- Check operation of all switches
- Start engine, and observe starting ability, exhaust color at start and at normal operating temperature, and listen for any abnormal sounds
- Check operation of all control
- Inspect track assemblies for tension, loose, worn or damaged parts(links, shoes, rollers, idlers)
- Inspect structure for cracks or faulty welds

2. Weekly or Every 50 Operating Hours

Perform all daily service checks

- Change engine oil and oil filter*
- Use the right oil for operating conditions
- Check and adjust fan belt tension*
- Replace hydraulic oil return filter*
- Grease swing bearing
- Clean air cleaner element

* Break-in service only
* See Table of Recommended Lubricants in this section for further information

3. Every 100 Operating Hours

Perform all daily and 50 hour service checks

- Check and adjust fan belt tension
- Check battery electrolyte level

4. 150 Operating Hours

Perform all daily, 50 hour and 100 hour service checks

- Check fuel element
- Clean fuel suction strainer

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1. SAFETY

1.1 GENERAL SAFETY ESSENTIALS

1.1.1 Accessory Applications

1. The excavator has been primarily designed for moving earth with a bucket. For use as a grapple or for other object handling, contact Daewoo.
2. DO NOT use the machine for activities for which it was not intended.
3. Use of an accessory hydraulic hammer(breaker), work in rough terrain, demolition applications or other hazardous operation may require installation of additional protective structures to safeguard the operator.

1.2 USE AND MODIFICATION PRECAUTIONS

To operate safely the excavator should be on a firm, level and uniformly supporting surface. The operator is expected to make due allowance for all specific work site and lift-related conditions, and respond to changes in those conditions that could pose a hazard. The following could all cause hazardous conditions and accidents or injuries :

- Soft or uneven ground
- Off-level terrain
- Side loads
- Modifications or poor maintenance of the excavator
- Failure to lift squarely over the end or squarely over side of the machine

When a load in the air, the operator must remain alert.

- Avoid side loads that may be caused by uneven slings, traveling with the load, or swinging too quickly.
- The load can become unbalanced if a hookline is twisted and starts to rotate. If the surface area of the load is large enough, wind gusts can create side loads.
- Keep the bucket hook point directly over the load. Taglines on opposite sides of the load can help maintain greater stability against side loads and wind gusts.

Avoid traveling with a suspended load. Before swinging(or if required, traveling), bring the load in to an arm position(radius and height) that is safe. The operator and all work site personnel should be thoroughly familiar with safety instructions within this Manual.

Taglines on opposite sides of the load can be very helpful in keeping a suspended load secure, if they are anchored safely to control points on the ground.

⚠ **CAUTIONS :** *If you need more information or have any questions or concerns about safe operating procedures or working the excavator correctly in a particular application or in the specific conditions of your individual operating environment, please consult your local Daewoo representative or call Daewoo After Sales Service.*

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15. Install valve drive in block. See Figure 6-54.

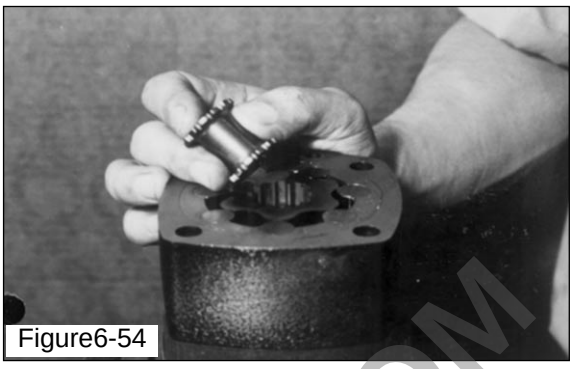

Figure6-54

16. Install O-rings (902S-12 and 9022S-6) on valve plate and install plate so that drain hole is lined up with block drain hole and O-ring surface is facing up. See Figure 6-55.

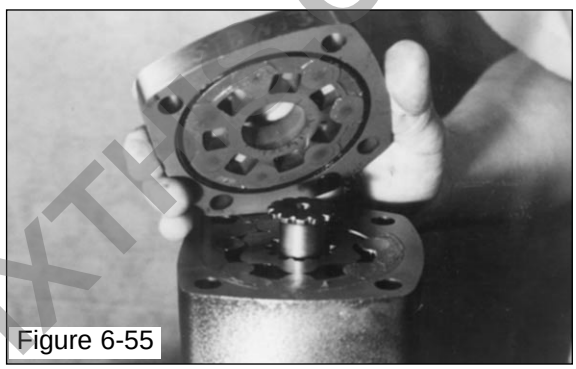

Figure 6-55

17. Install valve, taking into account the information on valve timing in Figure 6-57.
See Figures 56 and 57.

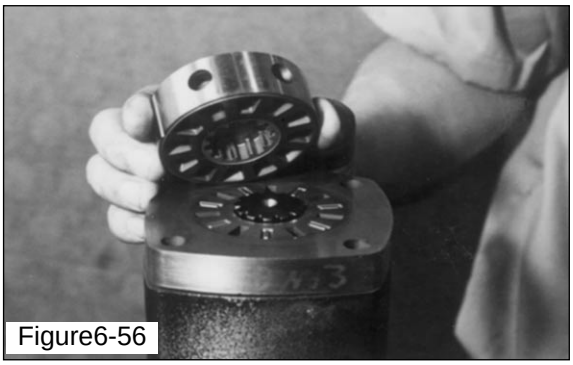

Figure6-56

1. Valve drive
2. Outer tooth
3. Block
4. Valve

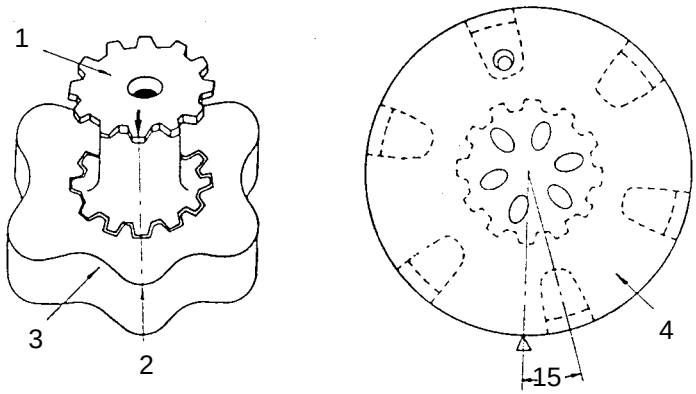

Figure 6-57

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10.4 STANDARD TORQUES

Unit : kg•m(fl lb)

Bolt, Nut type / Size	4T 	7T 	9T 
	SS41	**S40C, S45C**	**SCr4**
M 6	0.80~0,95 (5.78~6.87)	1.00~1.15 (7.23~8.31)	1.25~1.45 (9.04~10.45)
M 8	1.80~2.10 (13.01~15.18)	2.40~2.80 (17.35~20.25)	3.00~3.50 (21.69~25.31)
M10	4.00~4.60 (28.93~33.27)	4.90~5.70 (35.44~41.22)	6.20~7.20 (44.48~52.07)
M12	6.40~7.40 (46.29~53.52)	12.60~15.00 (91.13~108.49)	10.50~12.00 (75.94~86.79)
M14	11.00~12.80 (79.56~92.58)	7.90~9.20 (57.14~66.54)	17.00~20.00 (122.9~144.6)
M16	17.00~19.50 (122.9~141.0)	20.00~23.00 (144.6~166.3)	26.50~31.00 (191.6~224.2)
M18	25.00~29.00 (180.8~209.7)	28.00~32.50 (202.5~235.0)	35.00~41.00 (253.1~296.5)
M20	34.00~40.00 (245.9~289.3)	37.50~44.00 (271.2~318.2)	50.00~58.00 (361.6~419.5)

1. Adapter

Size	Torque
PT 1/4	3.5~4.5(25.31~32.54)
PT 3/8	4.5~5.5(32.54~39.78)
PT1/2	6.5~7.5(47.01~54.24)
PT3/4	8.5~9.5(61.48~68.71)

Size	Torque
PF1/4	6~8(43.39~57.86)
PF3/8	
PF1/2	
PF3/4	9~11(65.09~79.560)
PF 1	12~14(86.79~101.2)

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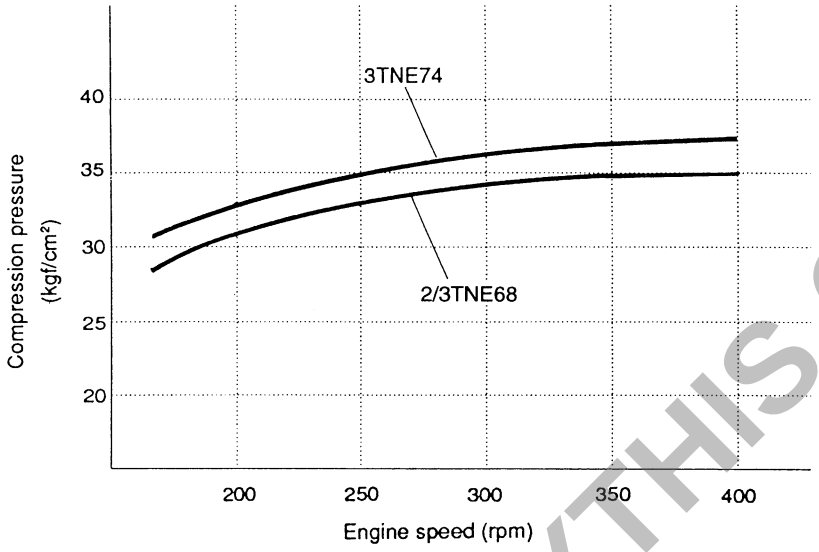
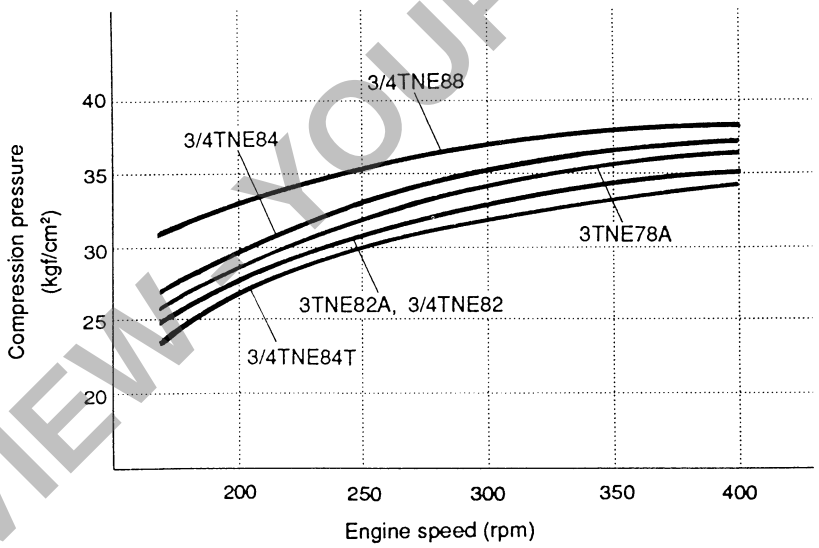
Reference: Variation of Compression Pressure with Engine Speed

(1) Indirect injection system



(2) Direct injection system



2. Action to be taken when the measured compression pressure is below the limit value.

Trouble occurs in a part of the engine. For troubleshooting, refer to Chapter 4, 4-2 trouble diagnosis through measurement of compression pressure.

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