

## INSTRUCTIONS FOR T2DR, T2DR-L, T3DR, T2GR & Y2DR

Read before operation and follow the instructions.

1) Lubrication:

Before operation, supply the oiler (OIL) in full with steam oil (Blue liquid). Lubricate metal, crosshead, crankshaft, eccentric, etc. as well as all revolution and movement sections with machine oil or 50 weight automobile engine oil. Supply oil, and lubricate the engine prior to every operation.

2) Breaking-In:

Initially, run the engine twice (for about 40-minute periods in total) at approximately 1,000 – 1,500 rpm. DO NOT EXCEED 1,500 RPM! On starting up T2GR for the first time, firing a boiler using one burner nozzle is sufficient because the engine should only be run at low speed during break-in.

3) Reversing gear:

Do not change the gear forcibly before breaking in. Change it at SLOW position during operation. Close the regulator once as change is difficult.

4) Avoid running the engine at maximum rpm without a load.

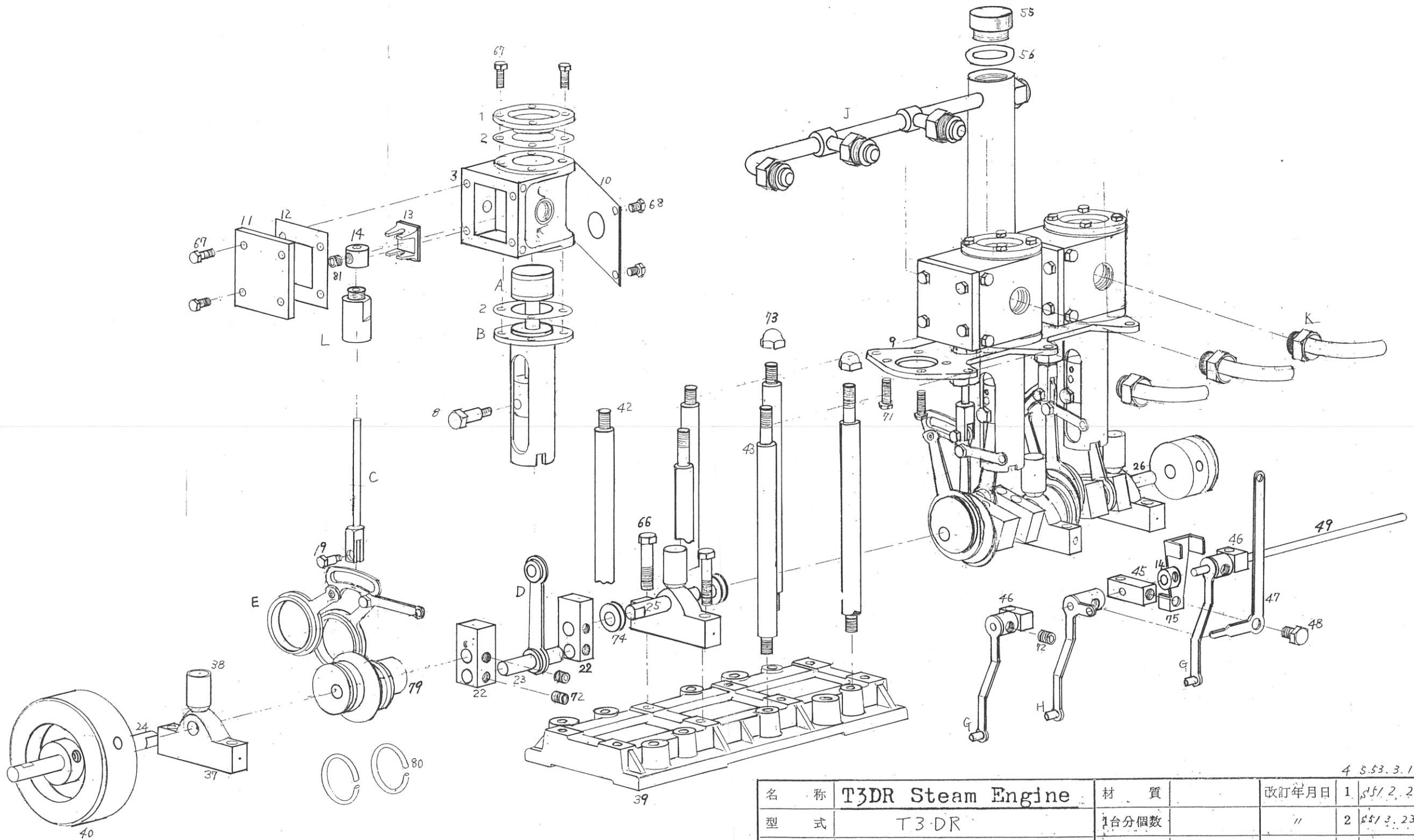
5) The engine should be mounted on a flat surface. If the surface is uneven, the engine bed will be warped and the shaft will not work smoothly. (Wood screws are sufficient for anchoring steam engines.)

6) Steam engines are not necessary to be adjusted always. However, with every operation, the engine must be supplied with sufficient oil (steam oil to the oiler, machine oil or 50 weight mobil oil to the others with the exception of the oiler).  
**Warning: DO NOT use machine oil or spindle oil in the oiler.**

7) Do not take the engine apart unless necessary.

**Any products disassembled by users shall be out of warranty.**

8) When the pressure gauge shows 2kg/cm<sup>2</sup>, open the regulator quickly to full-open position. When starting up a T2GR, the engine may knock badly due to a “water-hammer” phenomenon. This is not unusual nor damaging to the engine. Once the engine is warmed up sufficiently, it will run smoothly.



4 5.53.3.17

名称	T3DR Steam Engine	材質		改訂年月日	1	55/2.25
型式	T3DR	1台分個数		"	2	55/3.23
部品番号		縮尺		"	3	55/10.6
部品名		設計年月日	55/12/17	設計		
有限会社 齋藤製作所		図面番号				

# T3DR Parts List

NO	Description	Q' ty	NO	Description	Q' ty
1	Cylinder Head	3	47	Reverse Lever	1
2	Cylinder Packing	4	48	Reverse Lever Nut Pin	1
3	Cylinder	3	49	Reverse Shaft	1
8	Gudgeon Pin	3	55	Oiler Cap	1
9	Cylinder Base	1	56	Oiler Packing (O-Ring P-7NBR)	1
10	Cylinder Cover	3	66	Bolt [M3×12]	8
11	Valve Cover	3	67	Bolt [M2×5]	24
12	Valve Cover Packing	3	68	Bolt [M2×3]	12
13	Valve	3	71	Bolt [M2×7]	12
14	Valve Rod Collar	3	72	Set Screw [M3×3]	21
19	Valve Nut Pin	3	73	Cap Nut [M3]	6
21	Crank Arm [A]	3	74	Thrust Washer	4
22	Crank Arm [B]	3	75	Reverse Lever Stopper	1
23	Crank Pin	3	79	Eccentric	3
24	Crank Shaft [A]	1	80	"C" Ring	6
25	Crank Shaft [B]	2	81	Set Screw [M3×3 SUS]	3
26	Crank Shaft [C]	1	A	Piston Assembly	3
37	Crank Shaft Bearing [A]	4	B	Cross Head Guide Assembly	3
38	Oil Cup	4	C	Valve Rod Assembly	3
39	Engine Bed	1	D	Connecting Rod Assembly	3
40	Flywheel	1	E	Link Assembly	3
41	Pulley	1	G	Bell Crank Assembly (Both Side)	2
42	Stay Bolt [A]	3	H	Bell Crank Assembly (Center)	1
43	Stay Bolt [B]	3	J	Oiler Assembly	1
45	Reverse Bearing [A]	1	K	Exhaust Pipe Assembly	3
46	Reverse Bearing [B]	2	L	Valve Rod Guide Assembly	3