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**if it's diesel injection or turbo DENCO DO IT.**

## **FITTING INSTRUCTIONS**

### **TOYOTA HJ75 WITH INTEGRAL WASTE-GATE**

1. Remove exhaust manifold and exhaust system.
2. Cut 3 threads off top manifold stud 4<sup>th</sup> from front.
3. Fit Turbo Dynamics manifold with gaskets supplied, fit 2 washers per stud.
4. Fit Schwitzer S2A Turbo with Hi Flow Turbine with turbo exhaust outlet facing towards rear.
5. Fit oil return pipe to turbo with outlet at 6 O'clock and facing towards centre front of rear engine side cover. Mark side cover for drilling to  $\frac{3}{4}$ . Remove, drill and weld in  $\frac{3}{4}$  pipe to line up with oil out pipe. Replace side cover and connect pipes with old hose and clamps.
6. Remove I.D.I.C. motor from under intake manifold and remove oil sender unit to pick up oil supply using T piece supplied. Refit oil sender to end of T piece, connect oil hose.
7. Remove air cleaner top cover and disconnect hose from Venturi. Discard hose.
8. Remove rocker cover breather from Venturi and rocker cover saving the hose clamps.
9. Block crankcase breather hole on Venturi using rubber blanking plug and hose clamps.
10. Connect turbo outlet to Venturi with 2H 001 cast crossover pipe using hoses and clamps provided.
11. Fit air in pipe to turbo inlet using hose and clamps and bolt to air out crossover pipe using bridging bracket supplied.

12. Connect rocker cover breather to air in pipe using new hose supplied and original hose clamps.
13. Refit air cleaner top to air cleaner. Fit 2 ½" hose over end of cross over pipe. Fit convoluted hose between crossover pipe and air cleaner.
14. Adjust maximum fuel screw to obtain a maximum of 550°C under full load at the pyrometer. If seals are broken on pump, set maximum fuel on test bench at 150mm H<sub>2</sub>O vacuum and 1100 RPM to 49-50cc for 1000 injections.
15. Remove exhaust clamp plate from engine and entire original exhaust system. Fit exhaust out pipe to turbine outlet but don't clamp tight until rest of exhaust is in position.
16. Fit new clamp plate to engine block so as to fit over exhaust out pipe.
17. Fit 90 degree pipe to cast turbo dump pipe and loosely clamp at engine block plate.
18. Fit 12° pipe with expanded end onto long end 90° pipe and loosely clamp.
19. Fit 45° elbow with long expanded end onto 12° long pipe to face up towards cross member. Now fit 45 degree elbow with short expanded end so as to go over cross member.
20. Fit muffler and position muffler clamp over original exhaust mounting bracket so as it may be welded after positioning rest of exhaust.
21. Fit 15 degree elbow short end to muffler and position so as to pass beneath next original exhaust bracket and bolt and clamp in place with J shaped bracket supplied.
22. Fit double bent tail pipe so as to pass under rear original exhaust bracket and clamp in place using long L shaped bracket.
23. When exhaust system is in place tighten V clamp on turbo outlet first then tighten all clamps then weld muffler clamp to original bracket.
24. Road test vehicle and if necessary adjust stroke of waste-gate so as to achieve a maximum boost pressure of 50 KPA under load.

## **DENCO DIESEL AND TURBO**

### **WARNING TO ALL FITTING STATIONS**

INSTALLATION OF DIESEL TURBOCHARGER EMISSION CONTROL SYSTEMS SHOULD NOT BE UNDERTAKEN UNLESS YOU HAVE A BOOST GAUGE AND A PYROMETER.

**ALL TURBO-DYN SYSTEMS RUN AT 50 KPA BOOST MAXIMUM AND A MAXIMUM OF 500° UNDER POWER LOAD UNLESS OTHERWISE STATED.**

REMEMBER: OVER FUELLING NOT ONLY CAUSES BLACK SMOKE, IT ALSO GENERATES EXCESS HEAT. EXCESS HEAT CAN ALSO BE CAUSED BY AIR AND EXHAUST RESTRICTIONS SO CHECK ALL AIR CLEANERS AND DUCTING TO THEM FOR RESTRICTIONS BEFORE TESTING. EXHAUST BRAKES AND EXHAUST SYSTEMS SHOULD ALSO BE CHECKED FOR CORRECT OPERATION AND RESTRICTION.

EXCESS HEAT CAUSES MANY PROBLEMS INCLUDING HIGH N<sup>o</sup>X EMISSIONS, LAMINATION OF TURBINE HOUSING AND MANIFOLD, STUD STRETCH AND PREMATURE ENGINE FAILURE.

DENCO DIESEL WILL NOT ACCEPT LIABILITY FOR ANY PARTS RETURNED FOR WARRANTY THAT SHOW ANY OF THE ABOVE SIGNS.

WARRANTY WILL NOT BE CONSIDERED IF REPAIRS ARE CARRIED OUT WITHOUT DENCO DIESEL'S AUTHORISATION.

ALL KITS NOW HAVE DUMP PIPES WITH THE PROVISION FOR VDO PYROMETERS.

REMEMBER: IF SET CORRECTLY OUR PRODUCT IS ENVIRONMENTALLY FRIENDLY AND SAFER TO THE ENVIRONMENT THAN PETROL ENGINES.

**PARTS LIST FOR  
TOYOTA HJ75**

ITEM	QTY	PART NO.	BIN	DESCRIPTION	CHECK
1	1	313687-51		S2A Turbo with integral waste-gate & Hi-Flow Turbine	
	1	TDM144	D10	Actuator Bracket	
	1	MANTOY2L		Toy. 2H Turbo Dynamics Cast Manifold	
	4	TDM381	X30	1 ¼ x 3/8 Heat treated studs.	
	4	826.6212	U44	3/8 Lock nuts Hi-Tensile grade 8	
	1	132044	X7	Schwitzer Mounting Gasket	
	1	3LD1	B2	Cast oil in flange	
	1	A8-0504	T15R	90 degree x1/4 BSP x dash 5 elbow	
	1	147837	X7	Oil in gasket	
	2	826.0651	U49	20 x 8mm x 1.25mm Bolts & spring washers	
	1	TDM139	D14	Oil out pipe	
	1	148062	X7	Oil out gasket	
	2	826.0651	U49	20 x 8 x 1.25mm Pitch bolts and spring washers	
	1	6020-002	D19	3 inch V clamp	
2	6	DSF53	D6	Toyota Manifold Gaskets	
3	12	FWHT516	D11	5/16 Flt washers (Hi-Tensile Plated)	
<b>TOYOTA HJ75 PARTS LIST</b>					
<b>AIR IN</b>					
4	1	TDH2H002	D4	Cast air in pipe with 90 x 5/8 elbow with stud, spring washer and nut	
5	1	TDM140	D13	Clamp Bracket	
6	1	670blk-250	V4	2 Inches of 2 ½ Turbo hose	
7	2	HS40	HCB11	No. 40 Hose clamps	

8	1	670blk-250		11/2" of 2 1/2" turbo hose	
9	2	HS44	HCB13	NO.44 Hose clamp	
10	1	AH534	D9	Convoluted hose	
<b>AIR OUT</b>					
11	1	TD2H001	D3	Cast crossover pipe with 1/8 BSP plug, stud, spring washer and nut	
12	1	670-200	V2	2 inches of 2" turbo hose	
13	2	HS032P	HCB9	No.32 Hose clamps	
14	1	670-250	V4	2 inches 2 1/2 " Turbo hose	
15	2	HS040P	HCB11	No. 40 hose clamps	
<b>OIL IN</b>					
16		HOS32	D19	32 dash 5 oil hose with straight dash 5 ends	
17		A27-02	T15F	1/8 x1/8 BSP male nipple	
18		A7-0502	T16F	1/8x dash 5 straight fitting	
19		A35-02	T14F	1/8 BSP T piece	

**TOYOTA HJ75 PARTS LIST**

<b>NO</b>	<b>QTY</b>	<b>PART NO</b>	<b>BIN</b>	<b>DESCRIPTION</b>	<b>CHECK</b>
20	1	LOL-12		4 inches $\frac{3}{4}$ Oil resistant hose	
21	1	1374865		2 inches $\frac{3}{4}$ Steel tube	
22	2	HS010P	HC55	No. 10 Hose clamps	
<b>ENGINE BREATHER</b>					
23	1	TD80*270*16	D12	90 degree * 5/8 hose	
24	1	HS010P	D13	NO. 10 Hose clamp	
25	1	FS6069A		5/8 Rubber cap plug	
26				deleted	
<b>EXHAUST SYSTEM</b>					
27	1	TD 126		Cast exhaust dump pipe with heat shield	
28	1	DDHJ60-75-2MB		2 $\frac{1}{2}$ x90 degree elbow	
29	1	DDHJ75-3MB		2 1/2 x 12 degree long elbow expanded on long end	
30	1	DDHJ75-4MB	D7	2 $\frac{1}{2}$ x 45 degree Expanded on long end	
31	1	DDHJ75-5MB	D8	2 $\frac{1}{2}$ x 45 degree Expanded on short end	
32	1	TDM141	D15	4 hole plate and clamp assembly for engine block with 2 5/8 clamp welded on	
33	1	DDHJ75-6MB		2 $\frac{1}{2}$ x 15 degree Long elbow	
34	1	DDHJ75-7MB		2 $\frac{1}{2}$ x s bend expanded on short end (tail pipe)	
35	7	C12	W11	2 5/8 Exhaust clamps	
36	1	TR616CC250-GP		2 $\frac{1}{2}$ x Turbo muffler	
37	1	TDM145	D16	Centre T bracket with 2 $\frac{1}{2}$ clamp welded on.	
38	1	TDM146	D17	Tail pipe rear bracket with 2 $\frac{1}{2}$ clamp welded on	



