



364 Edward Street P. +61 2 6925 4348
Wagga Wagga NSW 2650 F. +61 2 6925 3314

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

FITTING INSTRUCTIONS

TOYOTA HZ80 SERIES

AS AT 24/6/04

1. Remove aircleaner assembly for accessibility, refit when kit installed.
2. Remove all the original exhaust system including manifold.
3. Fit 2 new manifold gaskets. (if required)
4. Fit turbo and manifold assy using original 2 cylinder manifold but without inner sleeve. Refit original manifold heatshield to new manifold.
5. Drain oil and remove oil level switch from the side of the sump then remove sump.
6. Mark sump for oil return, drill and weld so as to line up with turbo oil drain. Refit sump and connect oil drain to turbo using small piece of $\frac{3}{4}$ hose and clamps provided. Refill the sump with oil. Fit oil line support bracket and clamp to rear bolt on air crossover pipe flange. Fit large clamp to breather tube to locate oil hose.
7. Remove oil sender near starter motor and replace with items 27, 28, 29. Refit oil sender to top of T but backing slightly. Now connect oil to turbo with flex oil hose.
8. Connect turbo outlet to engine crossover pipe using 2 & $2\frac{3}{4}$ turbo hoses and cast HZ001 turbo air out pipe.
9. Fit $2\frac{3}{4}$ turbo hose 2" long to inlet of the turbo charger then fit HZ03 cast elbow with the short end facing turbo charger. Fit convoluted hose to HZ03 casting and HZ2A casting and fit $2\frac{3}{4}$ turbo hose 2" long to Air Cleaner.
10. Remove engine breather rubber pipe from rocker cover and crossover pipe and discard. Blank cross over pipe breather with $\frac{5}{8}$ cap plug and hose clamp. Now join rocker cover breather to HZ03 cast intake pipe using $\frac{5}{8}$ oil re. Hose provided.
11. Connect turbo exhaust dump pipe to turbine using V clamp. Allow clearance between chassis and inner guard.
12. Fit mounting brackets in sequence.
13. Fit flex pipe to dump pipe.
14. Fit the rest of the exhaust system in sequence from front ensuring clearance around pipes. The muffler sits under the original heatshield before second mount.
15. When you are satisfied the exhaust alignment is correct, tighten all clamps and mounts, check.

16. Fit boost guage and pyrometer.
17. Start engine and allow to idle for 5 minutes after oil pressure has been attained and check for leaks.
18. Dyno or road test vehicle and adjust maximum boost to 50KPA under full load by adjustment of actuator rod.
19. Adjust maximum fuel screw to obtain a maximum of 500°C exhaust under full load at the pyrometer.

WARNING TO ALL FITTING STATIONS

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

ALL DENCO DIESEL TURBO SYSTEMS RUN AT 50 KPA BOOST MAXIMUM AND A MAXIMUM OF 500°C UNDER POWER LOAD UNLESS OTHERWISE STATED.

REMEMBER: OVER FUELING 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 RESTRICTION BEFORE TESTING. EXHAUST BRAKES AND EXHAUST SYSTEMS SHOULD ALSO BE CHECKED FOR CORRECT OPERATION AND RESTRICTION.

EXCESS HEAT CASUES MANY PROBLEMS INCLUDING HIGH N°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 SHOWS ANY OF THE ABOVE SIGNS.

WARRANTY WILL NOT BE CONSIDERED IF REPAIRS ARE CARRIED OUT WITHOUT DENCO DIESELS 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 Denco DIESEL AND TURBO TOYOT HZ80

NO	QTY	PART NO	BIN NO	DESCRIPTION	CHECK
1	1	318276-51		Schwitzer S2A turbocharger with hi-flow turbine housing	
2	1	TDM312		Denco Diesel twin pulse manifold	
3	4	RRP	X30	1 x 3/8 studs	
4	4	8266212	X6	1x3/8 nuts	
5	1	3LD1	X21	Bronze oil in fitting	
6	1	SP8-450504	T18R	¼ BSP x 5/16 fitting* 45°	
7	4	8260651	X13	8mm x 20mm bolt	
8	4	8267170	X10	8mm spring washer	
9	1	TDM106	S8	1HZ oil out pipe	
10	1	6020002	H19	V clamp (exhaust out)	
11	2	DSF82	S7	Manifold gasket	
AIR IN					
12	1	670-275	V5	2 " x 2 ¾" Turbo hose	
13	2	HS044P	HCB12	No 44 hose clamps	
14	2	HS044P	HCB12	No 44 hose clamps	
15	1	HZ03	S13	Cast elbow with breather fittings	
16	1	TDHZ002A	S14	Cast elbow	
17	1	670275	V5	2 " of 2 ¾ turbo hose	
18	1	17881.54420		Convuluted hose	
19	2	HS044P	HCB12	No 44 Hose clamp	
AIR OUT					
20	1	670-200	V2	2 1/2" x 2" turbo hose	
21	2	HS032P	HCB9	No 32 hose clamp	
22	1	670-275	V5	2 1/2 " x 2 ¾" turbo hose	
23	2	HS044P	HCB12	No 44 hose clamp	
24	1	HZ001A	S12	Cast turbo air out pipe (TDM198)	
25	1	A64-02	T13	Boost gauge plug	
OIL IN					
26	1	TDM005		Oil line support bracket	
27	1	A35-02	T14F	1/8 BSP brass T piece	
28	1	A8-0502	T16R	1/8 BSP x 90° - 5 fitting	
29	1	A27-02	T15F	1/8 x 1/8 BSP straight fitting	
30	1	HOS32	H19	Oil supply hose	
31	2	5,421,215	H4	12 * 15 pipe clamps	
32	1	5,421,815	H4	18 * 15 pipe clamps	
33	1	57,612	C12	13 * 5mm bolts	
34	1	8266034	C12	6mm Nyloc nuts	
35	1	36,805	C12	5mm Nyloc nuts	
36	1	4260602	U47	20 * 6mm bolts	
OIL OUT					
37	1	TDM107	S2	1 HZ oil out elbow sump	
38	1	LOL-12		6" of ¾ " turbo hose	
39	2	HS010P	HCB5	No 10 hose clamp	
40	1	NG-FS6069	B12	5/8 cap plug	
41	3	HS010P	HCB5	No 10 hose clamp	
42	1	LOL-10		5/8" oil hose x 17" long	

EXHAUST OUT				
43	1	TDM108	R5	Turbo exhaust dump pipe
44	1	TDM450		HZ 80 flex pipe
45	1	TDM109	D19	Bracket Clamp
46	1	DDHZ80-4MB	R8	Pipe
47	1	TR616CC250-GP		2 ½ muffler
48	1	TDM110	D20	Bracket clamp
49	1	DDHZ80-5MB	R6	Pipe
50	1	DDHZ80-6MB	R10	Pipe
51	1	DDHZ80-7MB	R9	Pipe
52	1	TDM111	D21	Bracket clamp (HJ60 REAR)
53	6	C12	W11	Exhaust clamp

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