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

## **FITTING INSTRUCTIONS**

### **TOYOTA 2.4 LTR HILUX FITTING INSTRUCTIONS**

1. Remove air conditioner compressor, exhaust manifold and exhaust system.
2. Remove oil plug from rear of RHS of engine block, screw in oil elbow and attach oil hose. Retain plug for air pipe.
3. Remove banjo bolt from block (lower centre RHS) where oil from exhauster returns. Fit banjo bolt and hose elbow assy in place of and fit oil return hose to this adaptor, ready for turbo oil return.
4. Fit turbo and manifold as one assembly with new gasket supplied and then re-fit air conditioner compressor.
5. Connect oil in line to top of turbo and oil return pipe to oil return line. Make sure hose doesn't rub and keep away from any heat source.
6. Cut rear of front manifold heat shield so as to fit on turbo manifold and clear turbo.
7. Fit rectangle stainless steel heat shield to 6mm bolt protruding through firewall directly behind turbo using 6mm nut and spring washer supplied.
8. Remove breather pipe from inlet manifold and fit 3/8 blanking plug to manifold breather.
9. Connect air out of turbo to inlet manifold using crossover pipe, hose and clamps.
10. Remove throttle cable stay from rocker cover and fit relocating bracket to rocker cover. Adjust and tighten throttle cable stay.
11. Connect air in to turbo using aluminium elbow and bolting pipes together with bracket. Loosen and rotate rubber air cleaner hose to clamp to air in hose. Cut air cleaner hose to suit pipe.

12. Connect 10mm rocker cover breather pipe supplied to turbo air in pipe.
13. Disconnect Speedo cable from gearbox and relocate away from turbo area.
14. Fit turbo exhaust out elbow to turbine housing using bolts, nuts and stainless steel washers, do not fully tighten until whole exhaust is in place.
15. Using triple pressed 90° pipe, push short end into turbo outlet pipe and clamp to bell housing stay.
16. Fit long expanded of 90° elbow to end of triple pressed pipe (already fitted) with short end facing towards tail shaft. Now fit the short expanded 45° elbow to go under tail shaft. Then fit short end of shorter 90° elbow into 45° elbow to face towards rear of vehicle with the end of this pipe resting on centre exhaust hanger.
17. Fit expanded end of short 15° muffler, locating elbow to pipe, which is now protruding from centre exhaust hanger and clamp so as muffler and tail pipe will point in the correct direction.
18. Clamp muffler and tail pipe in position using original rear tail pipe hanger bracket and 2" solid exhaust clamp provided, then go back and weld bottom of clamp at centre to hanger, now weld both ends of 45° elbow under tail shaft. Tighten all clamps. Bend rod supplied to secure tail pipe and weld.
19. Adjust maximum fuel screw on fuel injection pump in by approximately 2 segments of the clock ie. From 12 o'clock to 2 o'clock.
20. Start and stop engine until oil pressure builds up then allow it to idle for 5 minutes whilst checking for oil leaks and air leaks. Re-check turbo V clamp and all hose fittings and clamps.
21. Fit boost gauge and adjust actuator linkage of waste gate to give a maximum of 60 KPA boost under load and 500°C.
22. Road test and re-check for leaks.

## 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 TURBODYN SYSTEMS RUN AT 60 KPA BOOST MAXIMUM AND A MAXIMUM OF 500° C 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 AND TURBO 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 AND TURBO 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 2.4 LTR HILUX**

<b>ITEM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>BIN</b>	<b>DESCRIPTION</b>	<b>CHECK</b>
1	1	313683		Turbocharger	
2	1	TDM147	19	Actuator Bracket	
3	1	TDM068		Aluminium sleeve	
4	1	80-025	W7	Purosil Hose	
5	1	MS8241	X2	Goss clips	
6	1	TDM324		Manifold	
7	1	311698		s/s gaskets	
8	4	TDM010	X18	M8 x 1.25 incanoll studs	
9	4	DNF	X17	Locknut	
10	2	0082 8 25		8 x 25mm capscrew	
11	1	DSF52	G6	Manifold gaskets	
12	1	TDM060	X29	S1BG oil out pipe	
<b>Air In</b>					
13	1	HS44	HCB12	No 44 hose clamp	
14	1	TDM153		Air in pipe with 3/8 x 3/8 elbow	
15	1	TDM154		Aluminium elbow	
16	2	670BLK-250	V4	2 1/2" x 2 1/2" turbo hose	
17	4	HS40	HCB11	No 40 hose clamps	
18	1	TDM148	13	Mounting bracket	
19	2	1250 8 26		8mm studs	
20	2	DNF	X17	Locknut	
21	1	FH1010	W4	14" x 10mm fuel hose for breather	
22	1	BP6-0606		3/8 blanking plug	
23	1	HS05P	HCB4	No 5 hose clamp	
24	1	TDM149	18	Throttle cable bracket	
<b>Air Out</b>					
25	1	TDM156		Air out casting	
26	1	670BLK-200	V2	3" x 2" turbo hose	
27	2	HS32	HCB9	No 32 hose clamps	
28	3	670BLK-225	V3	2 1/4 x 2 1/4 turbo hose	
<b>ITEM</b>	<b>QTY</b>	<b>PART NO.</b>	<b>BIN</b>	<b>DESCRIPTION</b>	<b>CHECK</b>
29	6	HS36	HCB10	No 36 hose clamps	

30	2	TDM155	TD2.25	2 1/4" x 90° cast elbow	
<b>Oil In</b>					
31	1	A25-02	A72-0202	1/8 x 1/8 male to female 90° elbow	
32	1	A7-0402	A7-0402	1/8 BSP x -4 fitting	
33		HOS26	G4	26" hose	
<b>Oil Out</b>					
34	1	TD80*270*16	W22	90° oil out hose	
35	2	HS10	HC5	No 10 hose clamps	
36	1	PRE162	G8R	Adaptor	
37	1	NW543	G8C	Copper Washers	
<b>Exhaust</b>					
38	1	TDM150		Dump pipe	
39	3	826 7078	X15	8 x 30mm bolts	
40	3	826 7170	X11	s/s washers	
41	1	DD2.4UTE-2		Triple pressed 90° pipe exp short end	
42	1	DD2.4UTE-3		Long 90° expanded and notched elbow exp long end	
43	1	DD2.4UTE-4		Short expanded 45° elbow exp both ends	
44	1	DD2.4UTE-5		Short 90° elbow	
45	1	DD2.4UTE-6		Expanded and notched 15° muffler locating pipe exp long end	
46	1	TR616CC250-GP		2" muffler	
47	1	TDM152	125	Firewall Heatshield	
48	1	826 6200	U67	6mm nut	
49	1	826 7051	U94	Spring washer 6mm	
50	1	TDM085	G12	Curved Heatshield and bracket	
51	7	C9	W12	2 1/8 exhaust clamps	
52	1	218198		2" solid clamp	
53	1	TDM151		20" long tail pipe hanger with 2 formed ends	



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33	1	HOS26	G4	26" hose										
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34	1	TD80*270*16	W22	90° oil out hose										
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37		NW543	G8C	Copper washers										
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52	1	2818198		2" solid clamp										
53	1	TDM151		20" long tail pipe hanger bar with 2 formed ends										

TAIL PIPES  
 4 WHEEL DRIVE UTES  
 4 WHEEL DRIVE FOUR RUNNER

3 PRESS BENDS  
 6 PRESS BENDS