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

FITTING INSTRUCTIONS

TOYOTA HILUX WITH 5LE ENGINE

As at 23/6/08

1. Remove fuel pump and send to Denco Diesel and Turbo for Recalibration
2. Remove complete exhaust system, exhaust manifold and plastic air box on top of engine.
3. Remove oil pressure plug from oil gallery just behind alternator and fit small false nipple and then loosely fit oil supply line.
4. Remove oil drain on block for vacuum pump. Now fit banjo assembly with extended hose banjo bolt and connect vacuum pump oil return to banjo and fit oil drain hose.
5. Fit two hole stainless steel Heatshield to firewall by using the two existing protruding screws and two nuts supplied.
6. Fit exhaust manifold with assembled turbo to engine using new gasket if required. Now connect turbo oil feed line and oil return line. When you have oil feed and return line situated so they don't rub on anything, tighten both ends using a spanner and hose clamps respectively.

✓ Note: Oil feed line should be on outside of turbo
RE: Fit electronically controlled fuel injection pump

7. Attach the new breather hose loosely to rocker cover ready for attaching to new position.
8. Remove throttle cable holder from engine head and discard. Fit new air box and front hold down bracket with 6mm bolts and nuts (supplied) and connect to intake manifold with turbo hose and clamps supplied. Now connect air cleaner and turbo to air box using cast elbows, turbo hose and clamps. Remove rubber capillary tube from air cleaner, block air cleaner fitting with cap blanking plug. Now connect capillary tube to boost fitting on rear of 4 outlet air box. You may now connect engine breather to elbow underneath air box making sure that breather pipe does not kink as this will cause turbo to pass oil.
9. Using exhaust V clamp attach the exhaust dump pipe to turbine outlet and tension so as dump pipe can still swivel from side to side.

10. Fit the short rod exhaust bracket to the rubbers near transfer case facing up and insert from rear of rubbers. Now fit long rod exhaust bracket over diff from rear of rubbers and then short single rod to rear of vehicle.
11. Fit first section of exhaust with flexi coupling to dump pipe so as to position 90° section under front drive shaft. Now position short double bent section of exhaust so as to face over first exhaust bracket assembly. Fit expanded section of intermediate pipe over bracket assembly. Fit expanded section of intermediate pipe over bracket then fit muffler so as to rest over diff bracket. Now fit tail pipe and wire into position ready for welding. Mark rear hanger position on pipe. Remove and weld. Clamp all joints and clamp first pipe to original engine bracket.
12. Because of the restrictive nature of the air pickup inside the LHS mudguard it is necessary to: a) disconnect the plastic pipe from the air cleaner to the inner guard OR b) Fit a cold air pickup or snorkel.
13. Fit boost gauge and pyrometer start engine and allow it to idle for 5 minutes whilst checking for air or oil leaks.
14. Road or dyno test vehicle and set maximum turbo boost TO 50-60KPA by adjustment of actuator rod, check pyrometer reading(with clean air cleaner) does not go above 500°C maximum.

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 DENCO DIESEL AND TURBO SYSTEMS RUN AT 60 KPA BOOST MAXIMUM AND A MAXIMUM OF 500° UNDER POWER LOAD UNLESS OTHERWISE STATED.

REMEMBER: OVERFUELING 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^oX 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 OF 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.

TOYOTA 5LE DIESEL ENGINE

No.	Qty.	Part No.	Description.	Check.
PREASSEMBLED.				
1	1	313798	S1BG Turbocharger	
2	1	TDMTOY5L	Turbo Exhaust Manifold	
3	1	TDM058	Actuator Bracket 5L	
4	1	TDM059	Manifold Heatshield	
5	2	826-0650	M8 x 12mm bolts for Heatshield	
6	2	826-7170	M8 stainless steel spring washers	
7	6	TDM010	M8 incanol studs for manifold	
8	6	DNF	M8 Hi tensile nuts	
9	1	SP3-0407	¼ hose x 7/16 x 24 UNS fitting	
10	1	80-024	24cm Purosil hose	
11	1	MS8241	Goss Hose Clamps	
12	1	TDM060	5L oil out pipe assembly	
13	1	TDM061	Turbo back plate S1BG	
14	1	TDM5LE-GASKET	EGR pipe gasket	
15	1	5LE BP 6mm	Blanking plate(to be used where no EGR pipe)	
16	1	6020-002	3" V-clamp for dump pipe	
17	1	DSF52	Manifold gasket	
18	1	TD5LE001	Four way casting	
19	2	CWG4	Rubber Grommets	
20	1	A64-02	1/8 BSP plug for boost gauge	
21	1	A35-02	1/8 T piece	

No.	Qty.	Part No.	Description.	Check.
22	1	A27-02	1/8 x 1/8 T piece	
23	1	B93-0302	1/8 BSP x 3/16 fitting	
24	1	BP6-0806	½ x 3/8 BSP hose elbow	
25	1	TDM062	2 leg bracket	
26	2	0250 6 20	6mm x 20mm studs	
27	4	826.6034	6mm nyloc nuts	
28	2	826.0606	1 ¼ x ¼ flat washers	
29	1	TD5L002	Air in pipe	
30	1	TD5L003	Air out casting	
31	3	670BLK-250	2 ½" Turbo Hose 2 ½" long	
32	6	HS040P	No. 40 hose clamps	
33	1	670BLK-225	2 ¼" Turbo Hose 2 1/2" long	
34	2	HS036P	No. 36 hose clamps	
35	1	670BLK-200	2" Turbo Hose 2 1/2" long	
36	2	HS32	No. 32 hose clamps	
37	1	FH1013	13mm breather hose 15" long	
38	1	A7-0402	¼" x 1/8" BSP fitting	
39	1	HOS445	445mm stainless steel oil supply hose	
40	1	TD80X270X16	90° oil out hose	
41	2	HS010P	No. 10 hose clamps	
42	1	PRE162	5/8 Adaptor	
43	2	NW543	Copper washer	
44	1	B317	Banjo	
45	1	TDS1DP	Dump pipe (TDM157)	
46	1	TDM-PLUG	Dump pipe plug	
47	1	TDM084	Fire wall heat shield	
48	2	826-6200	6mm nuts	
49	2	826-7051	¼" spring washers	

No.	Qty.	Part No.	Description.	Check.
50	1	TDM085	Curved heat shield	
51	1	670BLK-250	1 ¾" of 2 ½" Turbo hose	
52	1	PCPLATE	Blanking plate 5LE EGR	
53	1	VC18	1/8 VACUUM CAP	
54	2	HS40	HS40 HOSE CLAMPS	
55	1	3L001	2 ½ X 90° CASTING	
167 Exhaust.				
56	1	TDM086	No. 2 & 3 pipe with flex joint	
57	1	DDLN167-4MB	No. 4 short cross under pipe	
58	1	DDLN167-5MB	No. 5 long intermediate pipe	
59	1	TR616CC250-GP	2 ½" x 15 Turbo muffler	
60	1	DDLN167-6MB	No. 6 Triple bend tail pipe	
61	1	TDM087	Short rod and clamp bracket	
62	1	TDM088	Long rod and clamp bracket	
63	1	TDM089	Short rear hanger-weld	
64	4	C12	2 5/8 exhaust clamps	
172 Exhaust.				
65		TDM086	No. 2 & 3 pipe with flex joint	
66	1	DDLN172-4MB	No. 4 short cross under pipe	
67	1	DDLN172-5MB	No. 5 long intermediate pipe	
68	1	TR616CC250-GP	2 ½" x 15 Turbo muffler	
69	1	DDLN172-6MB	No. 6 Triple bend tail pipe	
70	1	TDM093	Short rod and clamp bracket	

No.	Qty.	Part No.	Description.	Check.
71	1	TDM088	Long rod and clamp bracket	
72	1	TDM089	Short rear hanger-weld	
73	4	C12	2 5/8 exhaust clamps	
LN147 2WD Exhaust				
74	2	DDLN147-2MB	No. 2 Adaptor pipe	
75	1	DDLN147R-3MB	No. 3.3 Bend pipe exp short end	
76	1	DDLN147R-4MB	No. 4 single bend pipe exp short end	
77	1	DDLN147R-5MB	No. 5.3 bend pipe exp shortened	
78	1	TR616CC250-GP	2 ½" turbo muffler	
79	1	DDLN147R-6MB	No. 6 tail pipe 3 bend	
80	1	TDM090	Short rod bracket (147)	
81	1	TDM088	(147) long rod bracket	
82	1	TDM092	Short rear hanger-weld	
83	6	C12	2 5/8 exhaust clamp	

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			LN147 2WD Exhaust						
74	2	DDLN147-2MB	No. 2 Adaptor pipe						

