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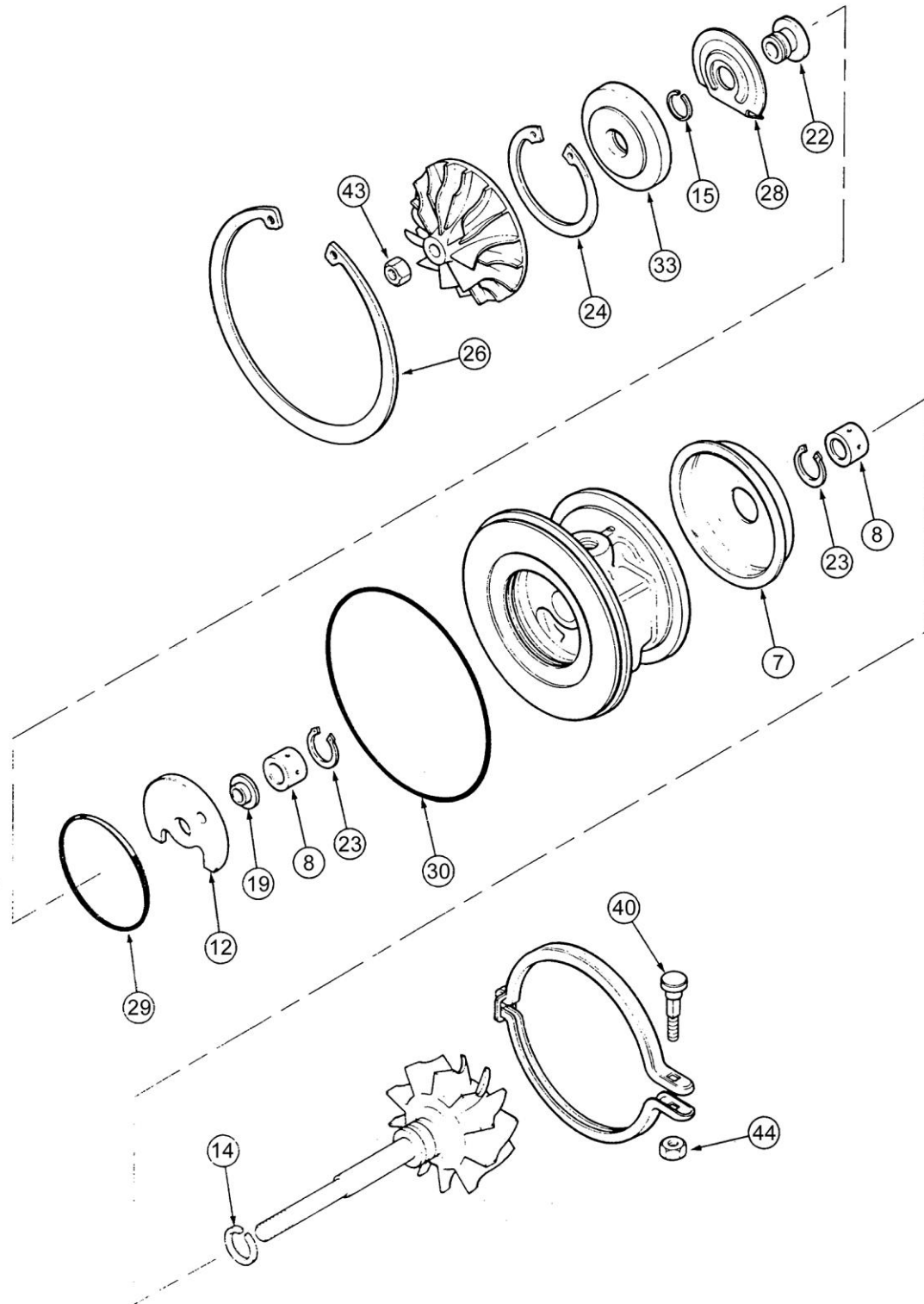
# Mitsubishi

## TD04

### Type Turbos

# TD04 Type

## Component Parts Common



# TD04 Type

## Repair Parts & Service Kits

All parts are available for purchase as individual components or in the following popular Repair Kits

Key	part number	Description	qty in Turbo	1401-404-750	1401-404-751	1401-404-752	1401-404-753	1401-404-754	1401-404-770	1401-404-771
7	1401-404-340	Heat Shield TD04 Aircooled	1						1	1
8	1401-404-100	Bearing TD04 Std OD/Std ID	2	2	2	2	2	2	2	2
12	1401-404-320	Thrust Bearing (TDO4)	1	1	1	1	1	1	1	1
14	1401-404-160	Piston Ring (TD04 Turbine End)	1	1	1	1	1	1	1	1
15	1401-404-170	Piston Ring (TD04 Comp End)	1	1	1	1	1	1	1	1
19	1401-404-240	Thrust Collar TD04/TF035	1				1	1	1	1
22	1401-404-200	Thrust Flinger TD04 (11.4mm)	1				1		1	
22	1401-635-200	Thrust Flinger TF035/TD04	1					1		1
23	1401-404-140	Retaining Ring TD04 J-Brg	2	2	2	2	2	2	2	2
23	1401-404-141	Spiral Retaining Ring (TD04 As)	2	2	2	2	2	2	2	2
24	1401-404-145	Insert snap ring TD04	1				1	1	1	1
28	1401-404-310	Oil Deflector (TD04)	1						1	1
29	1401-404-150	O Ring (TD04 Seal Plate)	1	1	1	1	1	1	1	1
30	1401-404-155	O Ring (TD04 Comp Cover)	1	1	1	1	1	1	1	1
33	1401-404-300	Insert /Seal Plate (TD04 F/Back)	1				1		1	
33	1401-635-300	Insert /Seal Plate TF035/TD04	1					1		1
43	1401-404-350	Shaft Nut RH Thread	1	1		1	1	1		
43	1401-404-351	Shaft Nut LH Thread	1		1	1	1	1	1	1
-	1900-000-042	Gasket (Oil Outlet TD04/05/06)	1				1	1	1	1

## Description of Repair Kits available

<b>1401-404-750</b>	Repair Kit (Minor) TD04 (RH Thread)
<b>1401-404-751</b>	Repair Kit (Minor) TD04 (LH Thread)
<b>1401-404-752</b>	Repair Kit (Minor) TD04 (Both types)
<b>1401-404-753</b>	Repair Kit (Major) TD04 Major Flatback
<b>1401-404-754</b>	Repair Kit (Major) TD04 Major Superback
<b>1401-404-770</b>	Repair Kit (Complete Internal parts) TD04 F/Back
<b>1401-404-771</b>	Repair Kit (Complete Internal parts) TD04 S/Back

*For oversize Journal Bearings and piston rings, see page 20*

*For Performance TD04 Thrust Parts,  
see 'Upgrade Parts' Catalogue Section page 21*

# TD04 Type

## Oversize Repair Parts Available

### Journal Bearings

TD04		
Standard	Standard	<b>1401-404-100</b>
+ 0.005"	- 0.005"	<b>1401-404-110</b>
+ 0.005"	Standard	<b>1401-404-114</b>
Standard	- 0.005"	<b>1401-404-117</b>
+ 0.010"	- 0.010"	<b>1401-404-120</b>
+ 0.010"	Standard	<b>1401-404-124</b>
+ 0.005"	- 0.010"	<b>1401-404-130</b>
+ 0.010"	- 0.005"	<b>1401-404-131</b>

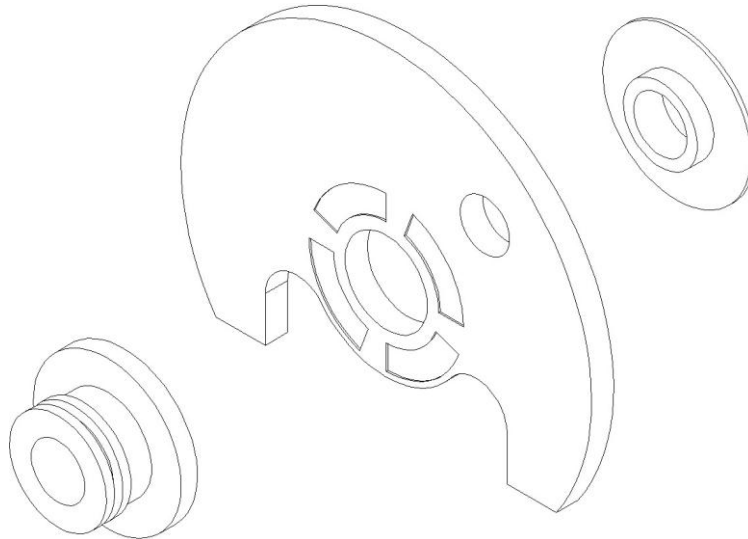
### Piston Rings

TD04		Turbine	Compressor
OD	Width		
Standard	Standard	<b>1401-404-160</b>	
Standard	Standard	<b>1401-404-162</b>	
+ 0.010"	Standard	<b>1401-404-180</b>	
Standard	+ 0.010"	<b>1401-404-181</b>	
+ 0.010"	+ 0.010"	<b>1401-404-182</b>	
Standard	Standard		<b>1401-404-170</b>

# TD04 Type

## Upgrade Parts

### Performance Thrust System



*For improved performance, Melett offer a 'Performance Thrust System' for the TD04 turbo models.*

#### **Why use a Melett Performance Thrust System?**

- *When used in high performance applications, the original bronze material used in the standard bearing cannot carry the increased axial load. The increased centre point load over the unsupported thrust face can cause the material to flex. In extreme conditions, this flexing can create contact between the thrust faces resulting in immediate failure.*
- *The material used in the Performance Thrust System is a special steel alloy. The steel has a higher stress limit than bronze and is also a more rigid material, which will deflect less under the same loads.*

#### **High Performance Bearing Material**

- *The material used for the thrust bearing is a special alloy designed for use in applications requiring high strength and good bearing properties. It has up to 10% porosity making it an ideal bearing surface by absorbing the oil like a sponge.*

#### **Increased size of thrust face reducing contact stress**

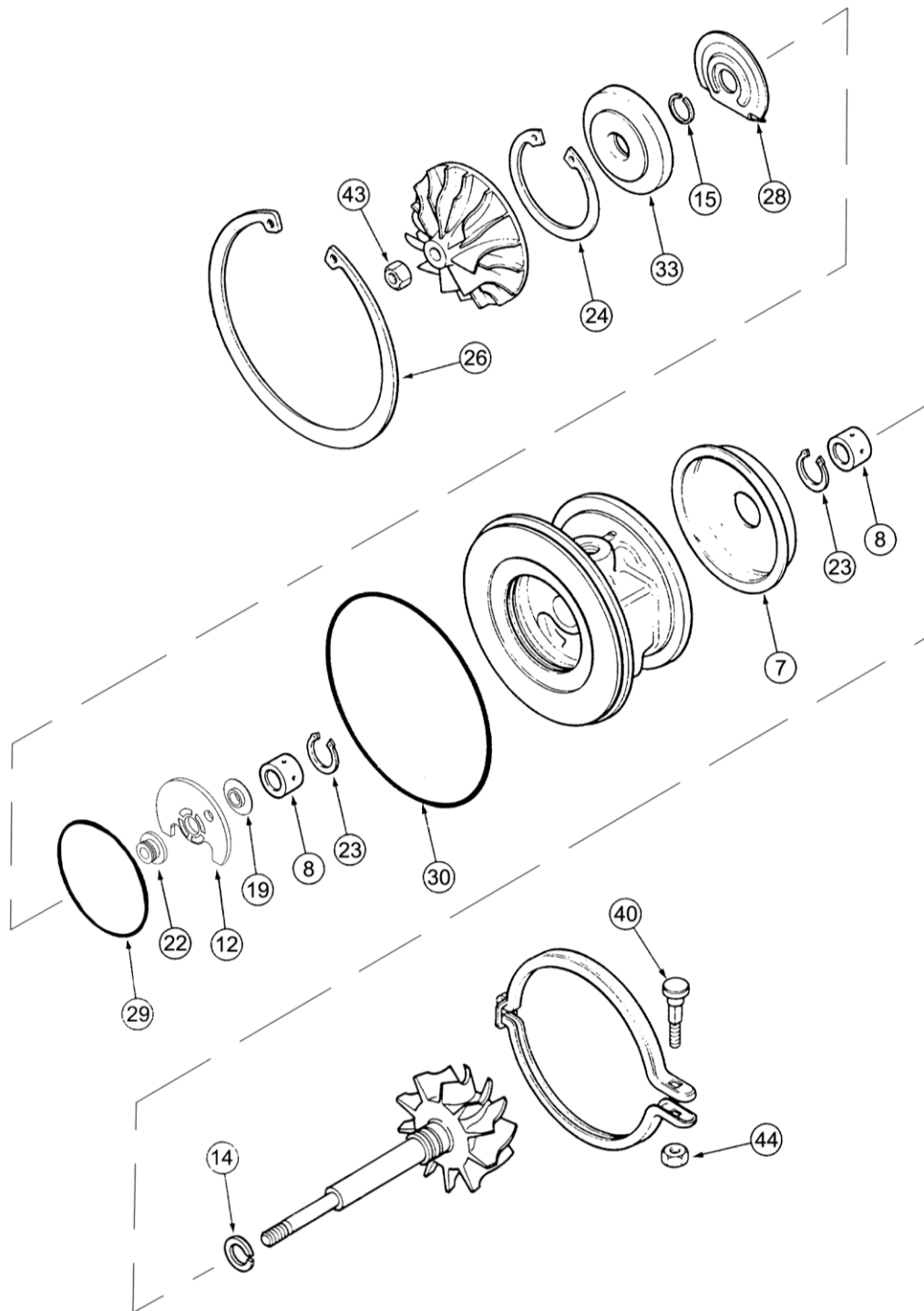
- *To enable the thrust system to carry the increased load, the thrust collar and spacer are manufactured to a larger diameter. This spreads the load over a larger area.*
- *An extra oil feed supply hole to the centre of the bearing helps to increase lubrication to the larger thrust face and also improves cooling.*

#### **Note:**

*These thrust parts must be used as a set and will not work in combination with the standard thrust parts.*

# TD04 Type

## Upgrade Parts



# TD04 Type

## Upgrade Parts

### Performance Parts & Upgrade Kits

As well as supplying the Performance Thrust Kit as a separate item, Melett also offers the following upgrade kits that offer excellent value for money in comparison to buying the individual piece parts.

Key	part number	Description	qty in Turbo	1401-404-761	1401-404-762
8	1401-404-100	Journal Bearing	2	2	2
23	1401-404-141	Spiral Retaining Ring	2	2	2
24	1401-404-150	O Ring (Seal Plate)	1	1	1
30	1401-404-155	O Ring (Comp Cover)	1	1	1
14	1401-404-160	Piston Ring (Turbine End)	1	1	
18	1401-404-162	Piston Ring (Step gap)	1		1
15	1401-404-170	Piston Ring (Comp End)	1	1	1
43	1401-404-350	Shaft Nut RH Thread	1	1	1
43	1401-404-351	Shaft Nut LH Thread	1	1	1
64	1401-404-760	Upgrade Thrust Kit	1	1	1
33	1401-635-300	Insert /Seal Plate superback	1	1	1
-	1900-000-042	Gasket (Oil Outlet)	1	1	1

### Description of Repair Kits available

<b>1401-404-760</b>	Upgrade Thrust Kit
<b>1401-404-761</b>	Upgrade Kit (Major) MHI TD04
<b>1401-404-762</b>	Upgrade Kit (Major) TD04 (inc. performance turbine piston ring)

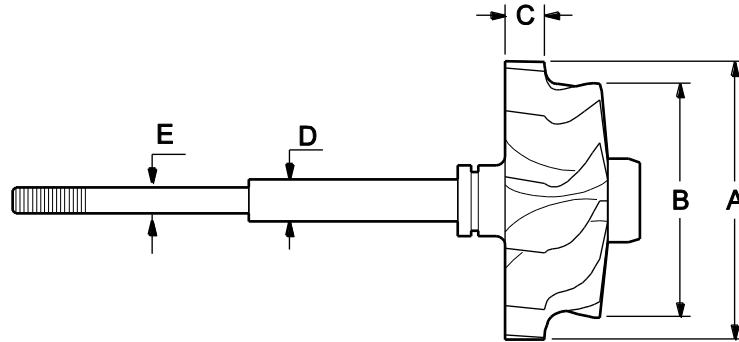
#### Note:

1. Care should be taken when installing the Performance Thrust System to ensure suitable clearance remains between the top of the thrust flinger and the bearing housing (allowing for shaft movement).
2. After installing the Performance Thrust System, check that the thrust clearance remains between 0.05mm-0.07mm (0.002"-0.003").
3. The Performance Thrust System is only available for use with super back compressor wheel. See Mitsubishi TD04 section for the full range of TD04 compressor wheels available from Melett.

# TD04 Type

## Major Replacement Parts - Detail

### Shaft & Wheel



OE Number	Melett Part No.	Inducer Diameter ØA	Exducer Diameter ØB	Tip Height C	Journal Bearing ØD	Comp. Wheel Bore ØE	Blades	Type of Shaft
49177-30130	<b>1401-404-437</b>	47.1	40.0	6.8	7.5	5.0	12	TD04
49177-30300	<b>1401-404-439</b>	47.0	41.3	7.7	7.5	5.0	12	TD04L
49183-30100	<b>1401-404-436</b>	52.0	44.2	7.7	7.5	5.0	12	TD04H
49189-30100	<b>1401-404-438</b>	52.0	45.6	8.9	7.5	5.0	12	TD04HL

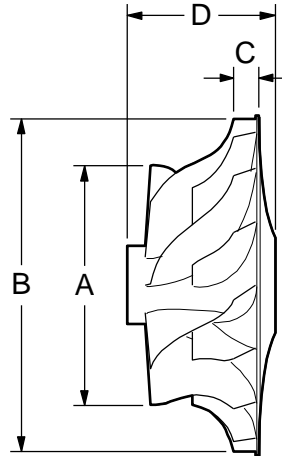
*Melett's fully qualified Engineers are available to answer any technical enquiry regarding limits, tolerances, and turbo set-up configurations. Email: [Engineer@melett.com](mailto:Engineer@melett.com)*



# TD04 Type

## Major Replacement Parts - Detail

### Compressor Wheel

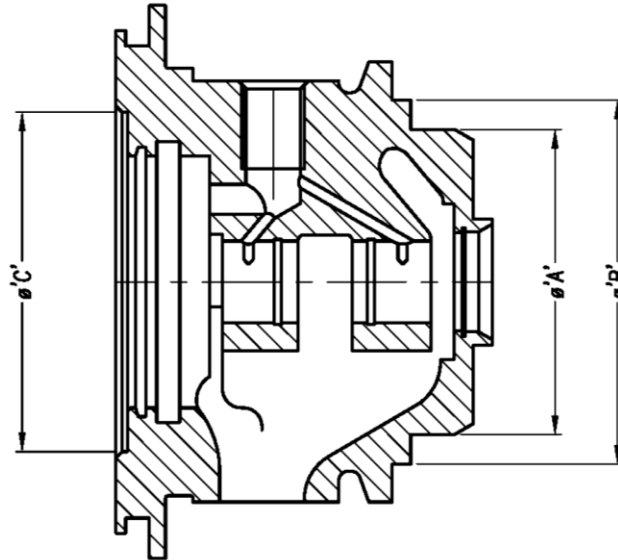


O.E.M. Designation	OE Number	Melett Part No.	Inducer Dia ØA	Exducer Dia ØB	Tip Height C	Total Height D	Blades	Flatback/Superback /trim	Shaft Bore Ø
TD04-09B	49171-41410	<b>1401-404-400</b>	34.9	49.0	4.7	20.0	12	Flatback	5.0
TD04-10T	Not Known	<b>In Dev</b>	35.5	49.0	4.5	24.2	6\6	Superback	5.0
TD04-11B	49171-41510	<b>1401-404-401</b>	37.0	49.0	5.2	20.0	12	Flatback	5.0
TD04-11G	49177-43300	<b>1401-404-403</b>	38.0	49.0	4.9	22.5	6\6	Flatback	5.0
TD04-12T	49177-44400	<b>1401-404-404</b>	37.8	49.0	5.3	22.5	6\6	Flatback	5.0
TD04-13C	49183-41500	<b>1401-404-402</b>	40.0	53.0	5.5	23.5	6\6	Flatback	5.0
TD04-13G	49177-43400	<b>1401-404-413</b>	41.5	56.0	5.0	23.0	6\6	Flatback	5.0
TD04-13G	49189-01400	<b>1401-404-413</b>	41.5	56.0	5.0	23.0	6\6	Flatback	5.0
TD04-13T-4	Volvo/BMW	<b>1401-404-424</b>	38.3	51.0	4.7	24.2	6\6	Superback	5.0
TD04-13T-6	49377-04100	<b>1401-404-425</b>	40.7	56.0	4.9	26.2	6\6	Superback	5.0
TD04-14T	Not Known	<b>1401-404-414</b>	39.6	51.0	5.3	24.2	6\6	Superback	5.0
TD04-15G	49183-41500	<b>1401-404-415</b>	43.4	56.0	5.4	23.0	6\6	Flatback	5.0
TD04-15G	49189-40300	<b>1401-404-415</b>	43.4	56.0	5.4	23.0	6\6	Flatback	5.0
TD04-15T	49189-43500	<b>1401-404-426</b>	42.0	56.0	5.4	26.2	6\6	Superback	5.0
TD04-16T	Not Known	<b>1401-404-427</b>	43.4	56.0	5.7	26.2	6\6	Superback	5.0
TD04-18T	49189-43800	<b>1401-404-428</b>	45.0	56.0	5.8	26.2	6\6	Superback	5.0
TD04-19T	49189-43900	<b>1401-404-429</b>	46.0	58.0	5.8	26.2	6\6	Superback	5.0

*These dimensions are supplied for identification purposes only*

# TD04 Type

## Bearing Housing



OE Number	Melett Part No.	A Dia (mm)	B Dia (mm)	C Dia (mm)	F Oil Inlet	G Oil Outlet	H Water	Description
49177-25100	<b>1401-404-450</b>	40.00	55.00	50.00	M10 X 1.25	M6 X 1	N/a	Oilcooled
49177-25600	<b>1401-404-452</b>	40.00	55.00	50.00	M10 X 1.0	M6 X 1	N/a	Oilcooled
49177-25700	<b>1401-404-453</b>	40.00	55.00	52.00	M10 X 1.0	M6 X 1	N/a	Oilcooled
49189-26030	<b>1401-404-461</b>	48.50	58.00	54.00	M12 X 1.5	M6 X 1	M12 X 1.5	Watercooled
49189-26050	<b>1401-404-462</b>	48.50	58.00	57.00	M12 X 1.5	M6 X 1	M12 X 1.5	Watercooled
49377-25510	<b>1401-404-464</b>	45.50	55.00	52.00	M12 X 1.5	M6 X 1	M12 X 1.5	Watercooled

**Note:**

Other bearing housings are due into stock throughout 2009 – ask Melett Sales for latest availability.

## Heat Shield

Melett Number	Description	Diameter	Depth	For B/Hsg
<b>1401-404-340</b>	Heat Shield (Air Cooled)	54.0mm	8.0mm	1401-404-450/452/453
<b>1401-404-341</b>	Heat Shield (Water Cooled)	57.5mm	13.5mm	1401-404-461/462
<b>1401-404-342</b>	Heat Shield (Water Cooled)	54.0mm	5.0mm	1401-404-464

# TD04 Type

## Turbine Housings



Make	Model	Year	Turbo Model	To fit turbo...	OE Housing No.	Melett Number
Mitsubishi	L200		TD04	49177-01503	49377-15200	<b>1401-404-892</b>
Mitsubish	L200		TD04	49177-02512	49377-15500	<b>1401-404-892</b>
Mitsubishi	Pajero 2.5L	87 →	TD04	49177-02500	49377-15590	<b>1401-404-890</b>
Mitsubishi	Pajero 2.5L	87 →	TD04	49177-02501	49377-15500	<b>1401-404-890</b>
Mitsubishi	Pajero 2.5L		TD04	49177-02510	49377-15400	<b>1401-404-890</b>
Mitsubishi	Pajero 2.5L		TD04	49177-02511	49377-15400	<b>1401-404-890</b>
Mitsubishi	Pajero 2.5L	84 - 91	TD04	49177-01010/20/30	49177-15122	<b>1401-404-891</b>
Mitsubishi	Pajero 2.5L	84 - 91	TD04	49177-01500	49377-15122	<b>1401-404-891</b>
Mitsubishi	Pajero 2.5L	84 - 91	TD04	49177-01501	49377-15300	<b>1401-404-891</b>
Mitsubishi	Pajero 2.5L		TD04	49177-01510	49177-15122	<b>1401-404-891</b>
Mitsubishi	Pajero 2.5L		TD04	49177-01511	49377-15300	<b>1401-404-891</b>
Mitsubishi	Pajero 2.5L		TD04	49177-02513	49377-15530	<b>1401-404-890</b>
Mitsubishi	Pajero 2.8L		TD04	49377-03041/3	49377-13200/300	<b>1401-404-893</b>
Volvo	740/940 2L&2.3L	89 - 95	TD04H	49189-01000/ 1200/ 1210/ 1260/ 1270	49189-16730/ 16830	<b>1401-404-894</b>
Volvo	850T5 2.3L	96 →	TD04HL	49189-01300/01	49189-17800	<b>1401-404-895</b>
Volvo	S70/V70 R	98 →	TD04HL	49189- 01310/20/30/35/50/ 55/70/75	49189-17830	<b>1401-404-896</b>