

I Must First Of All Thank You For Using Our Services And Buying This Pump Seal From Us

I Have Compiled The Following Pages With The Help Of A Phenomenal Mechanic Who Is The Most Knowledgeable Man I Have Met when It Comes To Pajeros And Shoguns . I Just Call Him The BLACK STIG.

I Can Always Call On Him If I Need Advice Or A Job Doing.

But I Need Your Help To Tell Me How I could Improve This Journal.

Now Please Read Before You Set About The Job

95mm

O-Ring

T & N

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T

N

12mm Bolt From Pump
Side All Other 12mm
from Front Of Van Into
The Threaded Holes In
Flange

Fine Adjustments
These Are Normally
Set OK So Don't Adjust

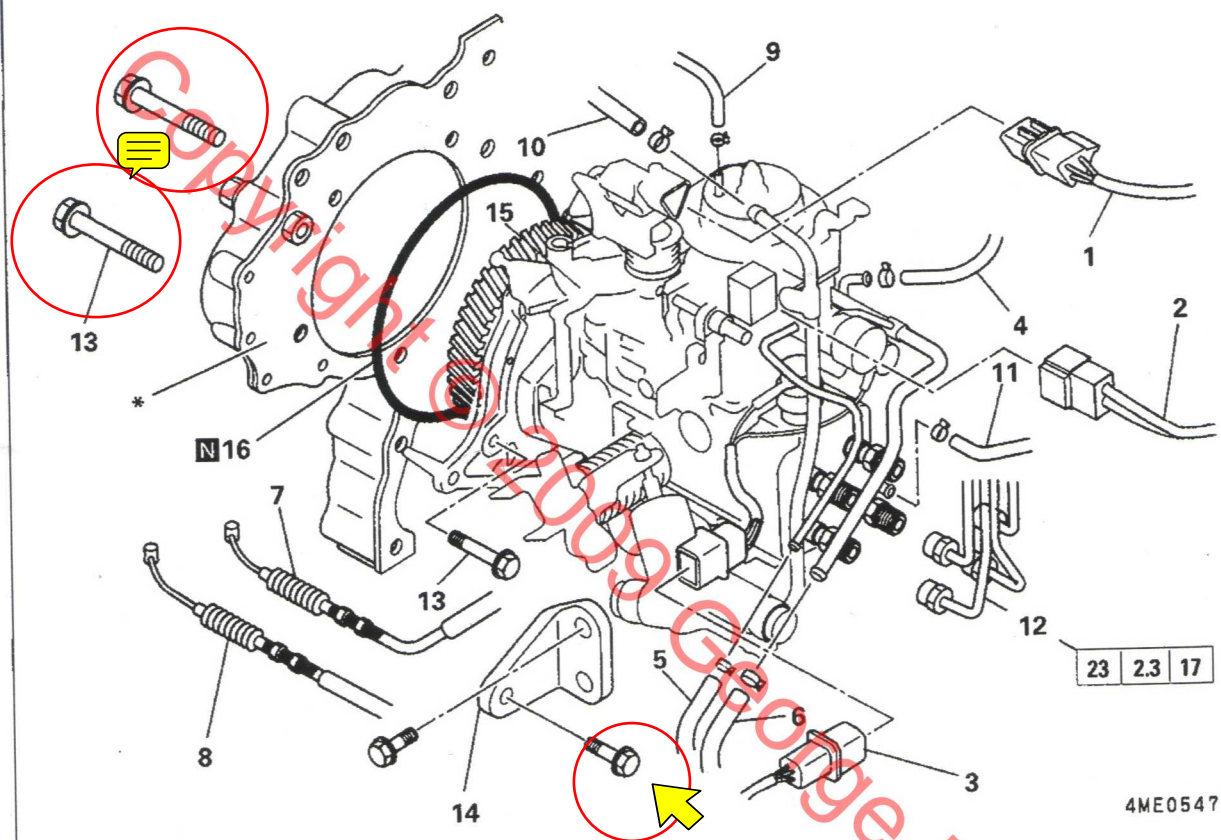
Pump Flange Facing On
To The Timing Chain
Cover

Tiny Marker
On One Tooth

Pump Flange Fixed On To
Pump By Two 12mm Nuts
For Finer Adjustment

22. FUEL INJECTION PUMP ASSEMBLY

REMOVAL AND INSTALLATION



Removal steps

1. Wiring harness
2. Wiring harness
<PAJERO 2001MODEL for Australia>
3. Wiring harness
4. Fuel leak-off hose
5. Fuel return hose
6. Fuel feed hose
7. Accelerator cable
8. Throttle cable
9. Boost hose <Turbo>
10. Water hose <with W-CSD>
11. Water hose <with W-CSD>
12. Fuel injection pipe
13. Bolt
14. Stay
15. Fuel injection pump assembly
16. O-ring
- *: Front plate

NOTE

W-CSD: Wax type cold start device

Tools You Need

1. 7mm Socket 
2. 8mm Socket
3. 12mm ring spanner 
4. 14mm ring spanner 
5. 17mm Open Spanner 
6. 19mm ring spanner 
7. 22mm ring spanner 
8. Long Nose Pliers 
9. torch 
10. Brake cleaner 

Instruction For fitting Fuel Distributer Pump Seal Including How To Remove And Time Pump

Remove The Intercooler held on by 4 X 10mm screws

Remove plate connected to it and electrical connection and small air pipes

Remove front battery

Remove Fan held on by 4 X bolts

Remove Fan Cowling

Remove air con belt

Remove power steering pump held on by 2 X 12mm bolts from the back

Remove servo pump adjacent held on by 2 x 12mm on front

Remove top water Hose

Remove accelerator linkage and all wiring connections going to the fuel distributer pump

Remove Kick down cable if car is automatic

Free Dip stick tube. Make sure the tube doesn't pull right out

Free The four injector pipes at the injectors and free the two diesel feed pipes

Take off wire to glow plugs

Find TDC. Do this by using the advice I have put in the timing chain fitting instruction.

The pump is held on by 3 X 12mm bolts on Front and 1 or 2 X 14mm at the back depending

DO NOT take the pump off without checking its timing marks which is a position between or on the "T" or "N" mark on the flange of the pump

Remove the 1 or 2 X 14mm at the back first

Then loosen the 3 X 12mm screws holding the pump so the pump casing can move backwards 6mm or so

As you are on TDC the timing mark on the pump will be easier to find.

One of the teeth is marked by a minute grinding of on one edge This is very difficult to see so you need a fine light

The pump flange has two arrows a few mm apart one marked "N" the other marked "T" apparently indicating Turbo and Normal but in my experience the ground off tooth could be anywhere in-between

A little tipex mark on the flange may make it easier to put back in the same place

With this done remove completely the 4 screws holding the pump on

Remove the pump

With the pump off you need to take off the front sprocket held on by a 19mm nut

This nut is fairly tight so you need to lock the cog with a metal rod and and maybe tap the ring spanner with a hammer

With nut off the cog is held by a taper. A puller is the best bet. If you use screwdrivers as wedges be careful not to crack the aluminium flange 

It may be a better idea to mark the flange plate and pump body if there is not one and loosen the two 12mm screws behind it so that you can put your wedges in there. This will have less likelihood of damaging the flange plate but bear in mind if you don't put it in the same place the timing will be altered in fact these two screw are the ones that allow for te pump body to be turned to fine adjust the pump timing.

The half moon woodruff locating key in the shaft will now drop out so don't loose it 

The seal fits to the shaft

The best way I found to remove the old one is by tapping a thin screwdriver into it and levering it out

Be careful not to damage the aluminium casing so slide the screw driver on the hard shaft but don't damage the shaft either.

Some people drill a tiny pilot hole into the seal and draw it out on a self tapping screw

You will no doubt notice that the old seal is very hard and not soft and flexible as the new one . That is what caused it to fail.

Clean up everything in the seal area with brake cleaner or other cleaner

Put oil lubrication on the seal then Push it in . 

I use a deep socket that fits over the shaft to very gently tap it right home

Now put it all back together 

You must check that the pump goes back onto the same timing mark 

Once again with a few mm of gap on the flange make sure it is on the mark. It may need a tiny amount of adjusting by putting a screwdriver into the hole the right hand ie power steering pump came out of to get it right . You will need to pull the pump backward enough to disengage it then move it a tooth and engage it again . This is the tricky and important bit so don't fret if it takes a while. But make sure you get it right 

With it all back together Prime it with a few pumps on the priming lifting pump and you are away

It may need a few turns to get the pump primed but should start no problem 

This info will help a mechanic but I will be updating these instructions regularly to make them as clear as possible. But you can always contact me for help or advice. Remember we can do the job for you .

I just need to add for legal requirements that I cannot be held accountable should any damage be done to your vehicle or injury to personnel during this procedure as this help sheet is only meant to advise you the way my mechanic has personally fitted these over many years.

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Now I Will Show You Some
Pictures Of The Job Being
Done.

These are only a sample of
photos that I thought were
interesting. I will be adding to
these as time goes by so keep
checking my site for updates

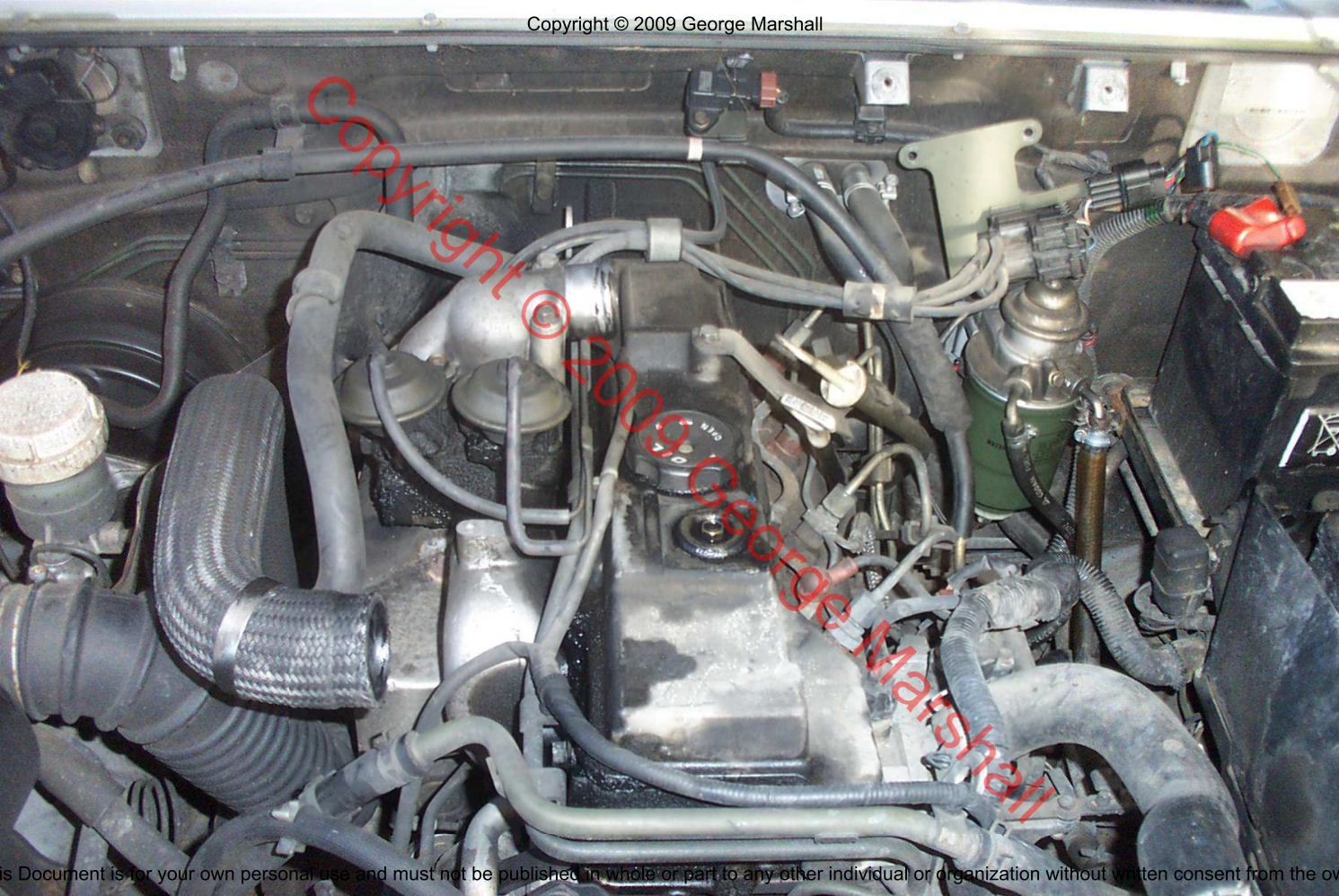


Whatever Job You Do Under The Bonnet You Seem To Always Remove The Intercooler.

In Fact It Is Only 4 10mm Screws Holding It And A Few More Moments To remove it's Pipes etc







Disconnect And Remove The
Front Battery

Disconnect The Second
Battery To Prevent Shorting
Out As Both These Batteries
Run In Parallel

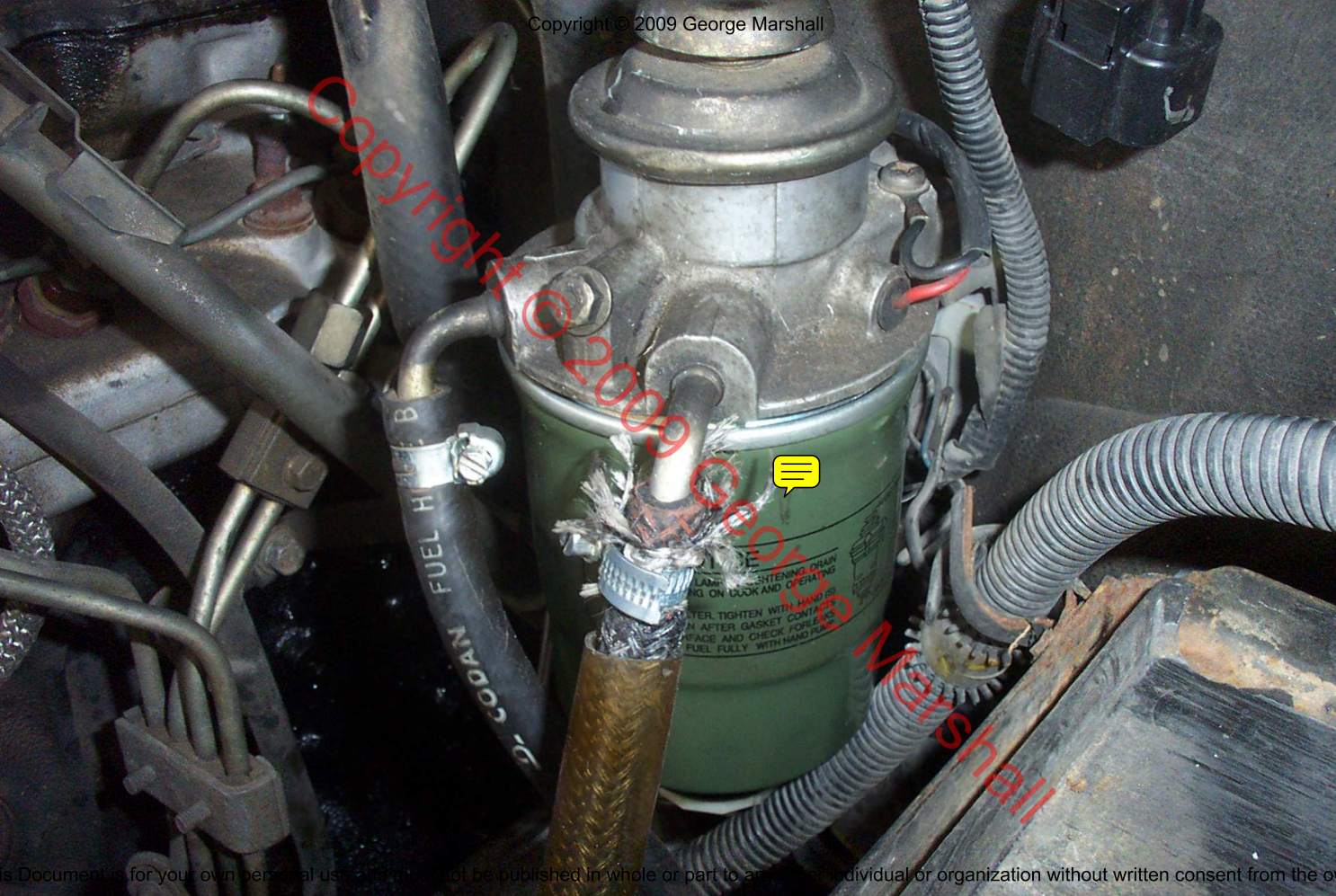


Just Thought I'd Show This. It Is The Lifter Pump Which Is Useful For Priming The Distributer Pump.

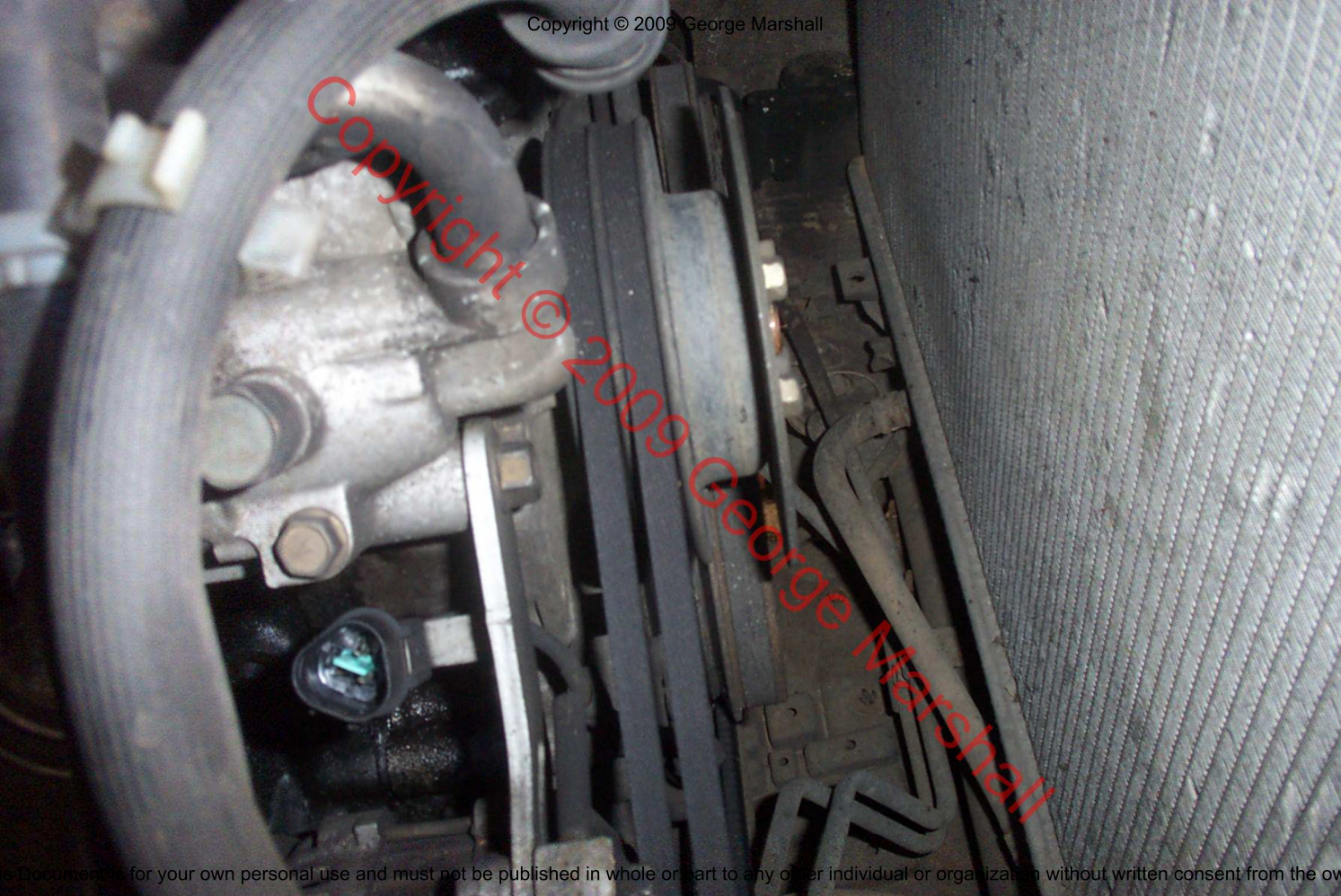
Obviously You Wouldn't Confuse These Two Because This Pump Just Holds The Fuel Filter And Takes Minutes To Take Off And Refit.

If Your Oil Seal On The Distributer Pump Has Been Failing Then This No Doubt Full Of Dirty Engine Oil Rubbish So Should Be Changed.

Hopefully The Fuel In The Tank Isn't Too Contaminated. Sometimes The Tank Needs Draining And Cleaning If It's Been Going On For Too Long And You Have Been Using An Electrical Inline Pump As An Interim Measure



Remove The Fan And Cowling
Top Hose etc etc. This Fairly
Opens Up The Area You Will
Be Working On



Remove The Two Pumps From The Front Of The Fuel Pump.

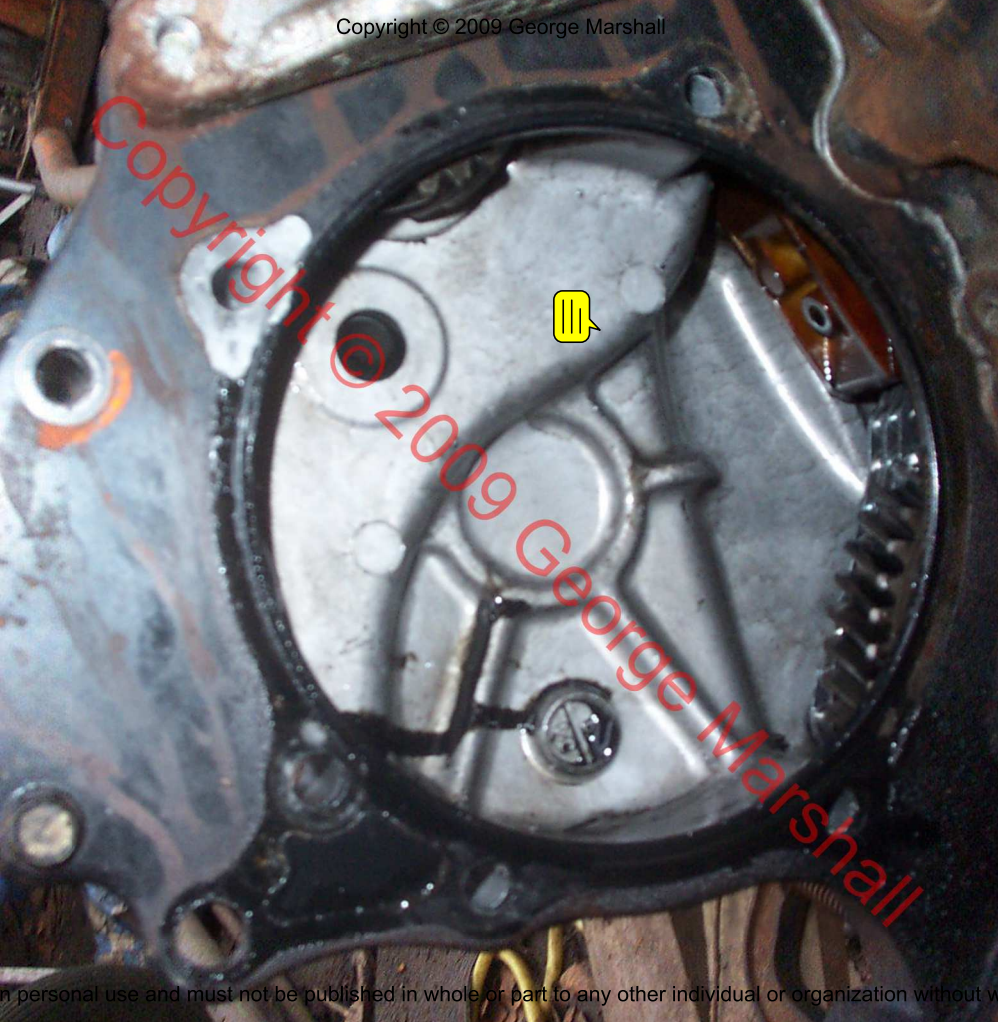


This Will Not Only Begin The Process Of Freeing The Fuel Pump But You Will Be Able To See The Fuel Pump Gear Through The Two Holes Left. You'll Be Able To Poke Around In Here Later To Assist With The Pump Timing





This is the hole the pump
sprocket fits into viewed from
the back



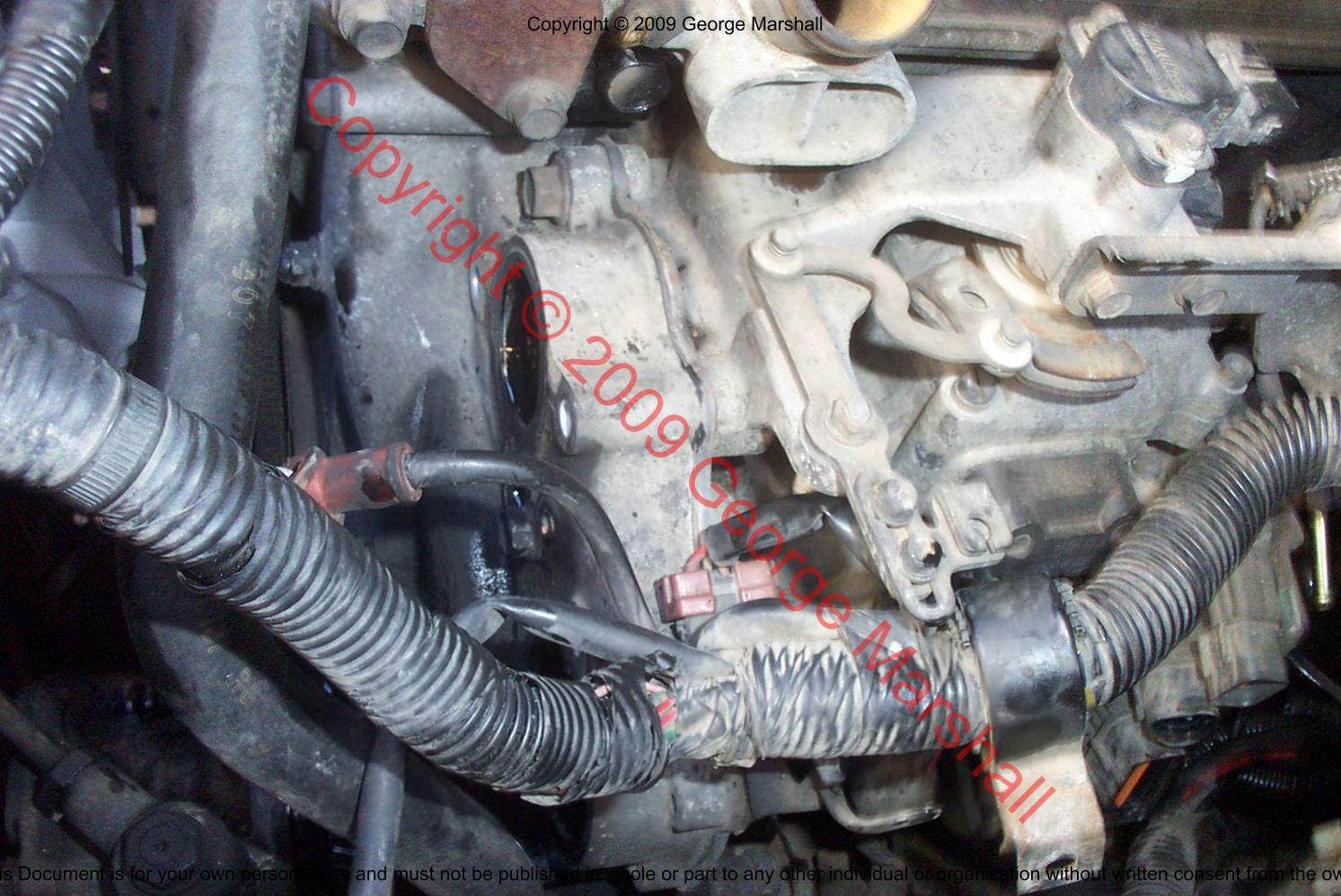


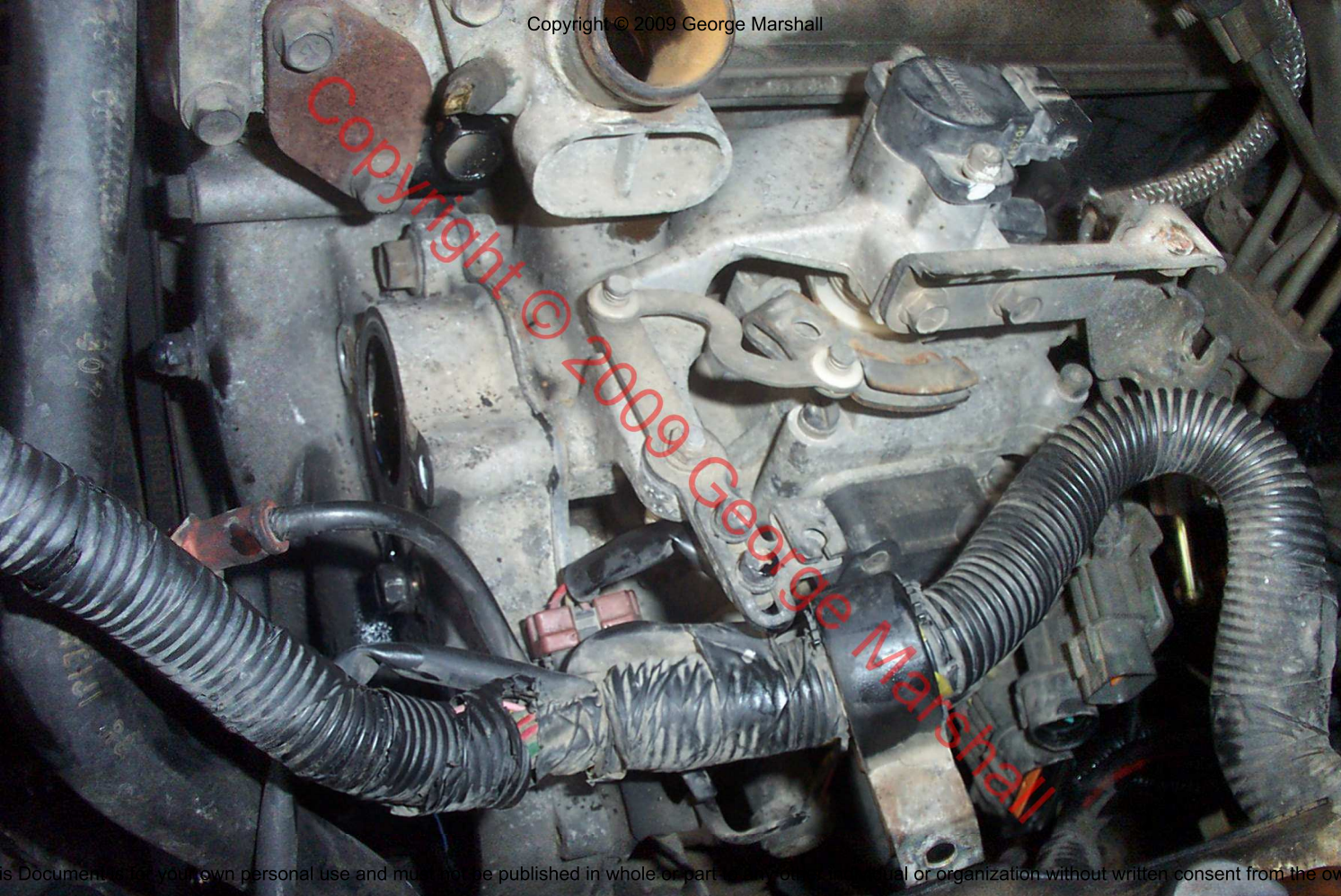


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If You Follow My Instructions
And Use A Sprinkling Of
Common Sense Then You
Would Have Removed All The
Cables Pipes And Electrical
Plugs etc That Stop The Fuel
Pump From Being Removed
And The Pump Will Be Ready
For Removal





I have added a picture of the back of the pump so you can see the 14mm bolt that needs to be removed.

The two 12mm nuts I have circled the line they are in .But of course they are on the front flange that you loosen to fine adjust the pump by turning it. You should have no need to do this unless the timing was out before



Don't Forget Though!! You Mustn't completely Remove The Pump Until You Have Found The Timing Marks On The Pump. If The Pajero Used To Run OK Before Your Seal Started Causing Trouble Then The Pump Timing Must Have Been OK. It Doesn't Move By Itself. Make Sure It Goes Back In The Same Place

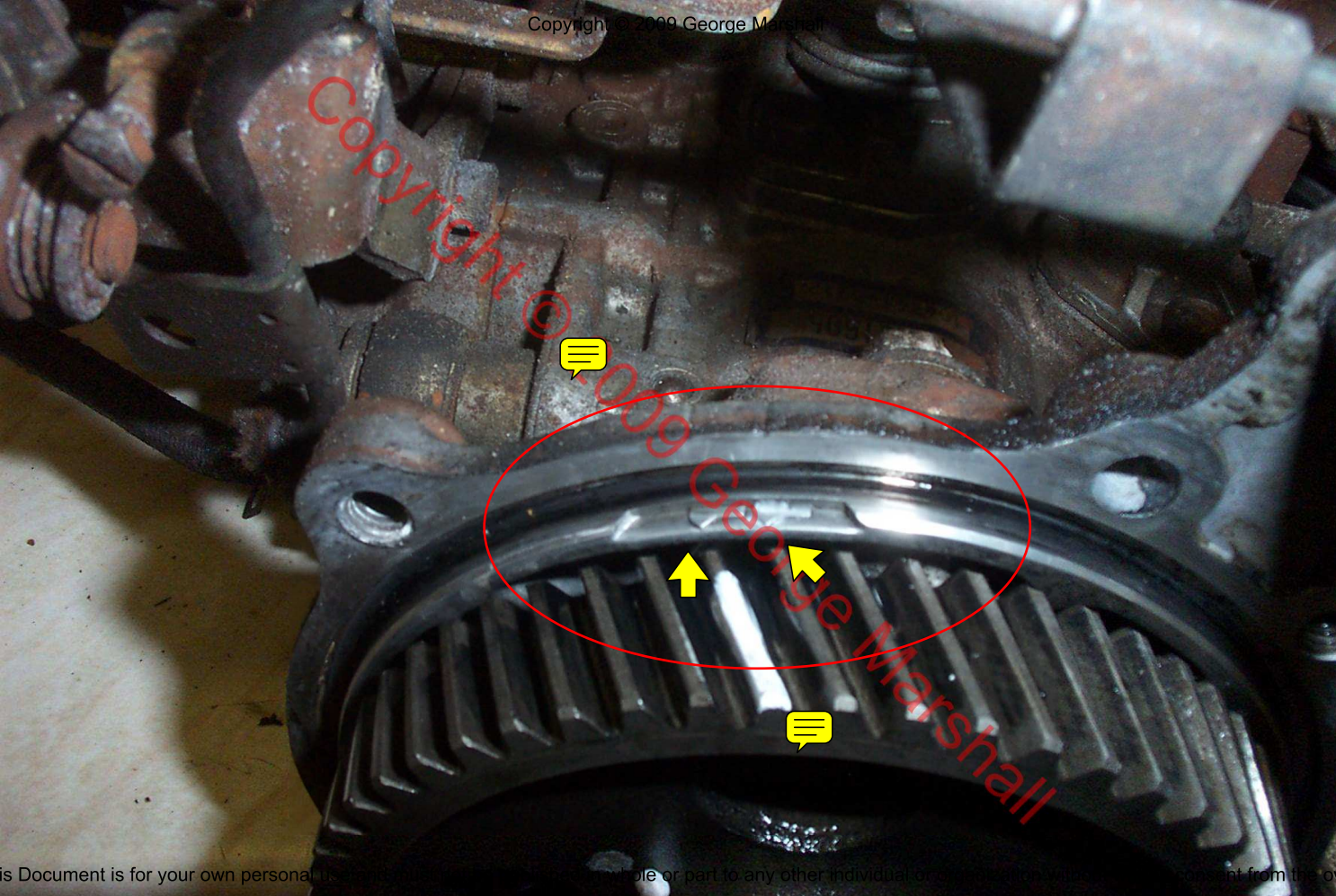
Now I Will Show You The Timing Mark. This Is
Incredibly Hard To Spot Because The Little Ground
Off Corner On One Of The teeth Is Tiny. I Don't
Know Why Mitsubishi Didn't Make It Easier.

When You Find It Mark It With Tipex So You Don't
Have To Keep Searching For It.

I Have Added Some Real Photos Which Shows It
But Only Just. And I've Added Some Sketches I Did
So You Know What You Are Looking For









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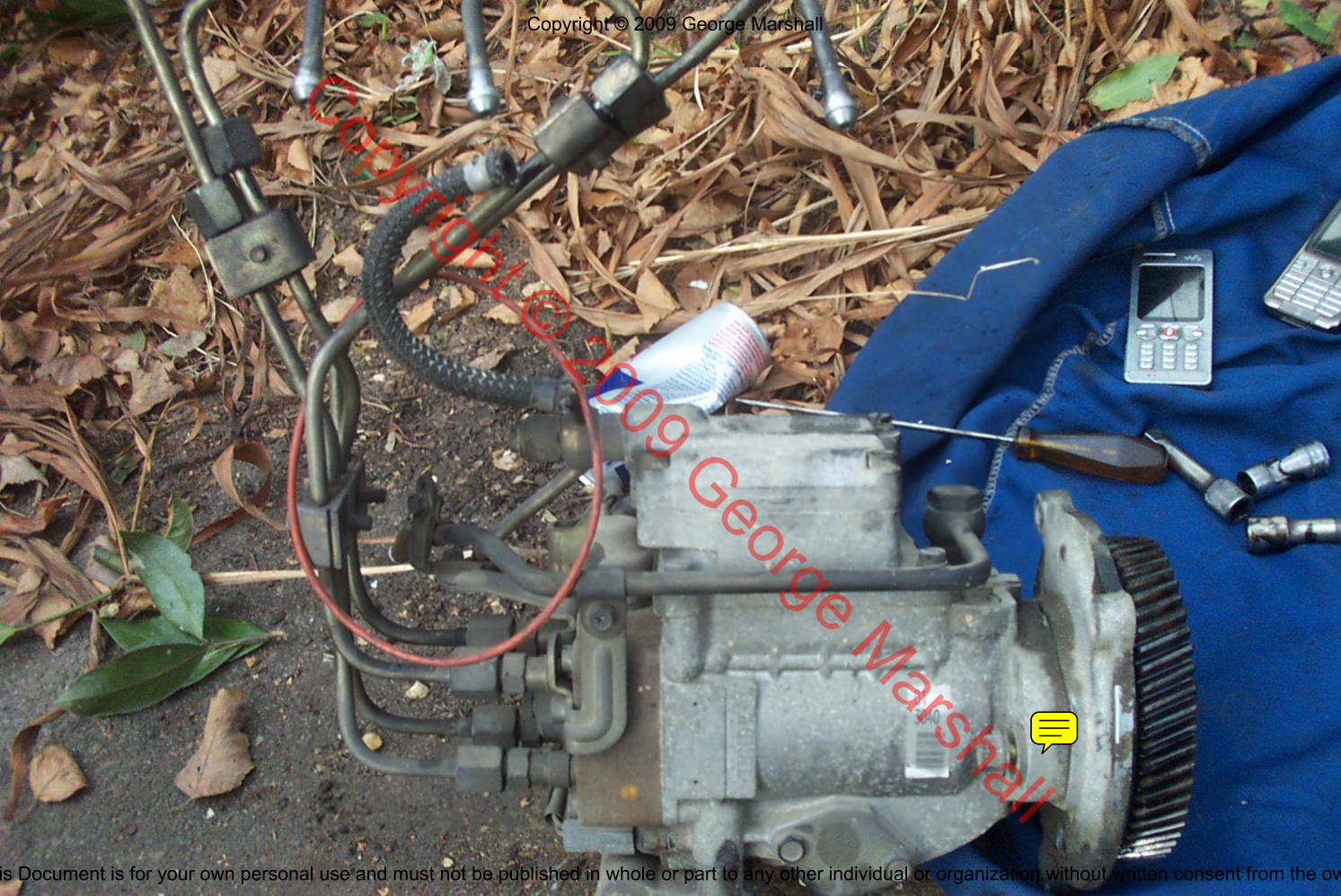




I Hope You Could Just About
See The Ground Off Corner. It
Is Important To Find It. Some
People Are Better Than Others
At Spotting It

Your Pump May Not Look
Exactly Like This Because This
Is An Electronic Pump Where
As Yours Is Probably A
Mechanical Pump. Don't
Worry The Seal Is The Same
It's Just The Accelerator
Cables And Electrical Cables
Etc That Is Different





A Tip For **Undoing The 19mm Nut** That Holds The Gearwheel
on the pump To Stop It Turning Is To Put An Extension Bar
From Your Ratchet Set Or Another 12mm bar Through A Hole
In The Cog And Lock It In The Back plate. Then Tap The 19mm
Ring spanner With A Hammer.

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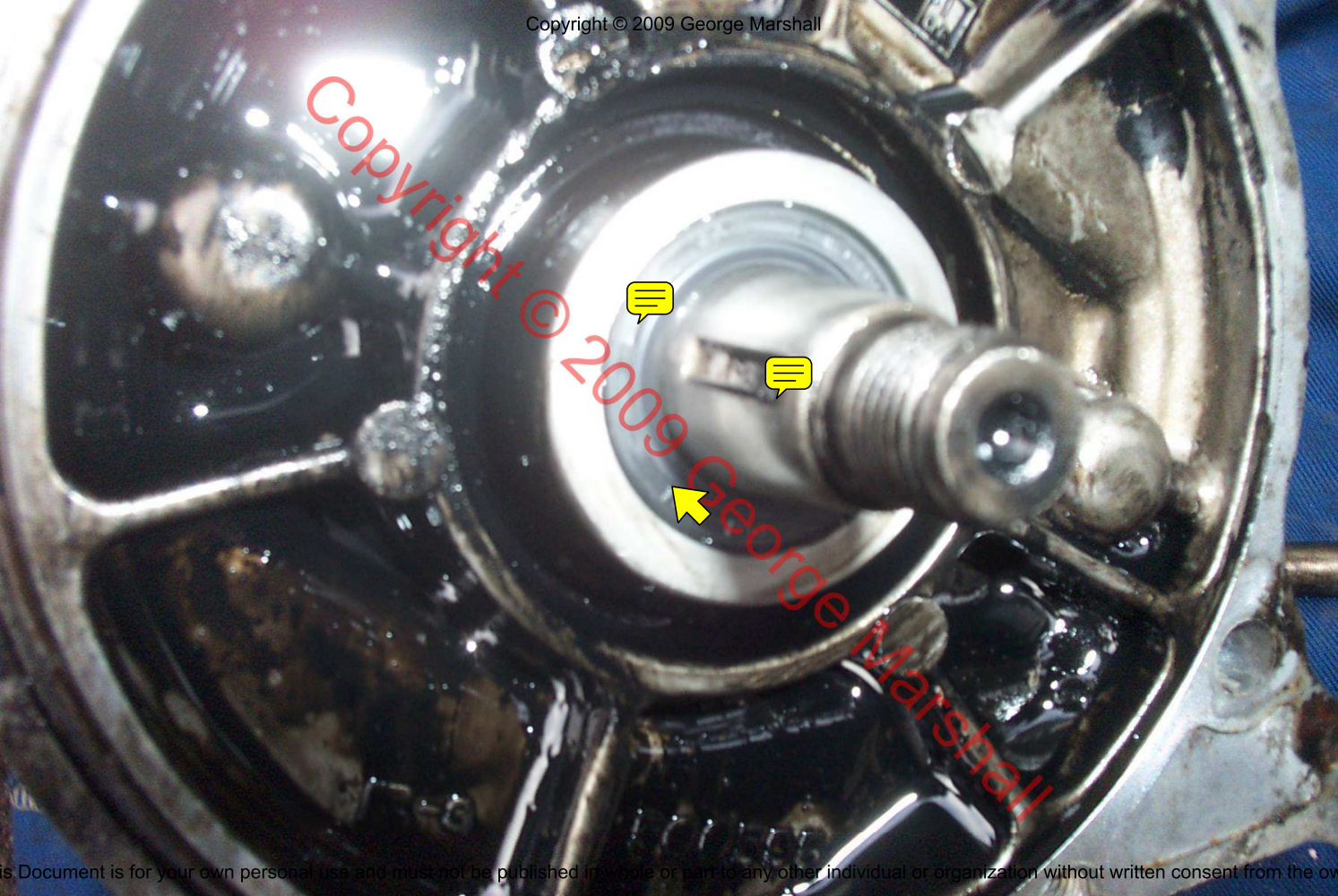
I Have Now Added Pictures Of
The Seal Itself.

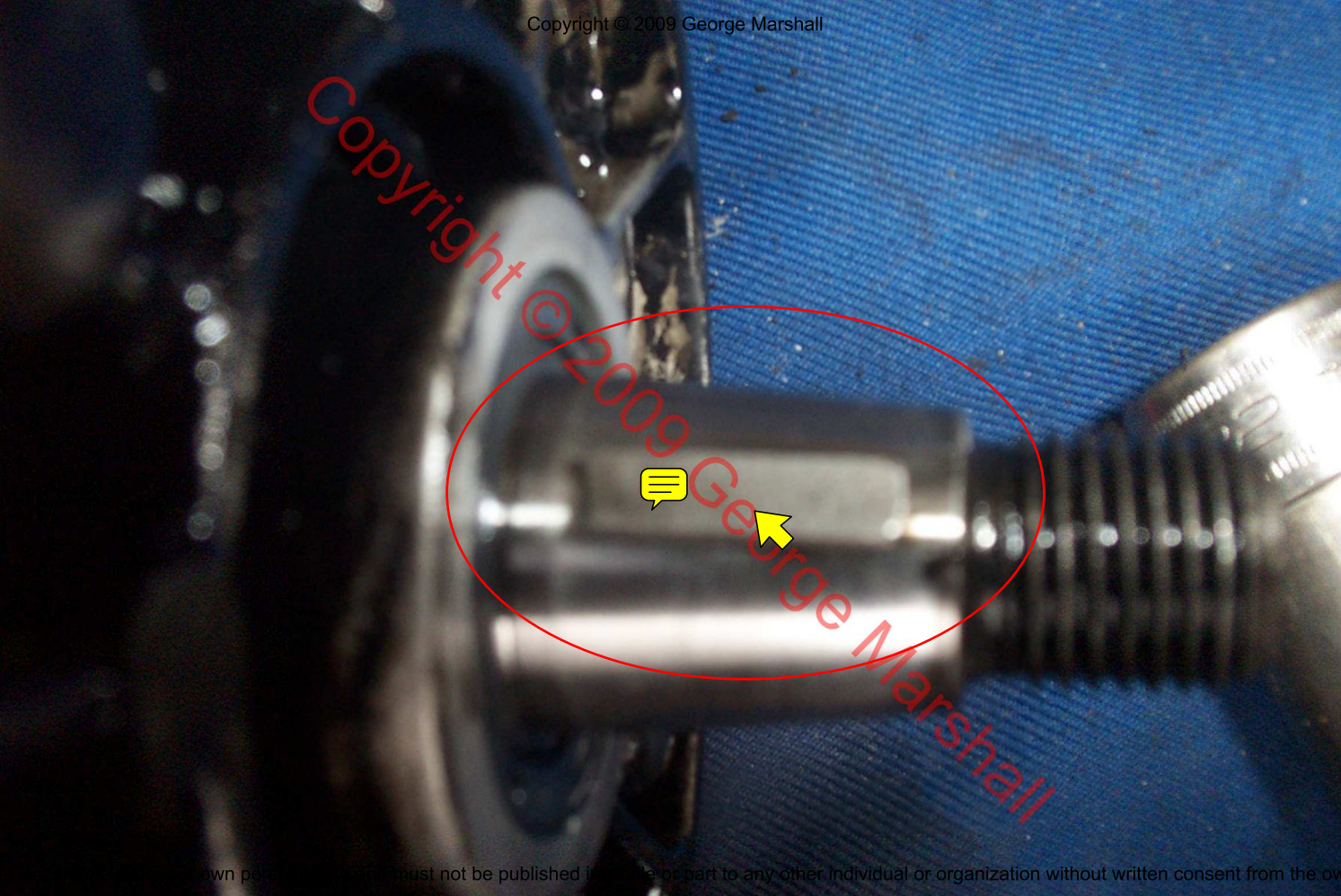
The First Is With The Seal
Removed. You Can See The
Bearing

Then I Have Shown The Seal
Fitted

Then You Can see Where The
Woodruff Key Fits







I Do Believe That With This Information Any Competent Mechanic Will Be Able To Do The Job.

If All Goes Well It Is A Half Day Job.

But It Is Tricky Job Unless You Have Done It A Few Times Which Is Why I Will Remind You That We Will Always Give As Much Advise As Can Be Done Over The Phone Or Internet.

But rest Assured It Is All Well Worth It To Get Your Confidence Back In Your Old Pajero.

I Would Appreciate It Greatly If You Could Leave A Positive Feedback On Ebay Or Even  Mention Me On The Pajero Forums