



# DOUBLE OR NOTHING

SINGLE-PLATE CLUTCHES HAVE THEIR PLACE ON THE SCENE, BUT WITH FOUR CONSECUTIVE CLUTCH FAILURES IN OUR MAVRCK PROJECT CALAIS, IT WAS DOUBLE OR NOTHING THIS TIME AROUND  
 STORY BY JACK DREWETT PICS BY JACK DREWETT

**D**riveline breakages have always been a close companion of mine. As much as I hate to admit it, I wouldn't know what it's like to own a car and not break every moving part on it continuously.

It was just the other day that I sat down and added up the various VL driveline components that I've sent to VL hell (which I'm quite sure is located somewhere around the Northern Suburbs of Melbourne).

I bought my first VL five years ago now. Since then, I've condemned three automatic gearboxes, one automatic tailshaft, two manual gearboxes, two manual tailshafts, one genuine turbo bottom end (at just 170,000km), one diff, two heavy-duty clutches, two brass-button clutches and two flywheels.

Not bad considering the Calais has been off the road the majority of the time I've owned it.

The bottom line is I'm pretty unlucky when it comes to keeping the mechanics of my cars in one piece, and when it came to this clutch change, I wasn't prepared

to be unlucky again. This meant I wasn't interested in making compromises. It was time for a twin-plate clutch or no clutch. It was time to bite the bullet.

The clutch I ended up going with was none other than the big daddy. It's called a 'Hyper-Multi Twin Plate', and it's a product from the clutch gurus at Exedy. Exedy has been producing tough-as-nails street/strip and circuit motorsport clutches for as long as we care to remember, and its reputation in the industry is second to none.

I have personally owned a couple of Exedy clutches in the past, and all have served me well. I knew that I just picked up one of the best clutches on the market, now it was simply a matter of getting it in there.

A twin-plate clutch is a bit trickier to fit than a traditional unit, but with a little assistance, we managed to get the job done. Andrew from Andrew's Automotive generously offered us his hoist, and all-round nice guy Justin Moloney (his VL Calais is featured on page 84) spun the spanners. The rest, as they say, is history.



**1.** Here you see the remains of the brass-button clutch I most recently destroyed. Note the cracked flywheel, which was actually fractured in roughly 30 separate places. We've all heard the horror stories, and it's scary stuff indeed



**2.** Remember that second-hand twin-plate clutch I was talking about giving a go in my Staff Ride's column? Well, here you see it on the right. Turns out that the plates were worn beyond any kind of use, hence the brand spanker on the left



**3.** This is what we were left with once the gearbox (drained of all fluid), tailshaft, fried clutch and cracked flywheel had been removed. The spigot bush was all good, and as such didn't need to be changed

**4.** Before we could install the actual clutch, we needed to fit the flywheel that goes with it. The Exedy Hyper-Multi comes with its own special flywheel as you see here.

The flywheel is held in place by the imaginatively named flywheel bolts, which need to be thread locked and tightened to Exedy's specifications. Ensure that you do as we did and wipe the flywheel clean of any dirt, dust or fingerprints before proceeding to the next step

**5.** The first of the two clutch plates can now be fitted. Note the small tool that looks like an input shaft that we used to locate the plate.

Many high-end clutch companies like Exedy supply these with the multi-plate kits. If they don't, then you are best off finding a smashed gearbox and cutting off the input shaft. It is not advisable to install a clutch without using an aligning tool.

They are also commercially available, or can be made using wood or steel in a lathe

**6.** This intermediate flywheel-type face separates the two clutch plates and is the next piece of the puzzle. The locating ribs around the outside of the primary flywheel hold it in place

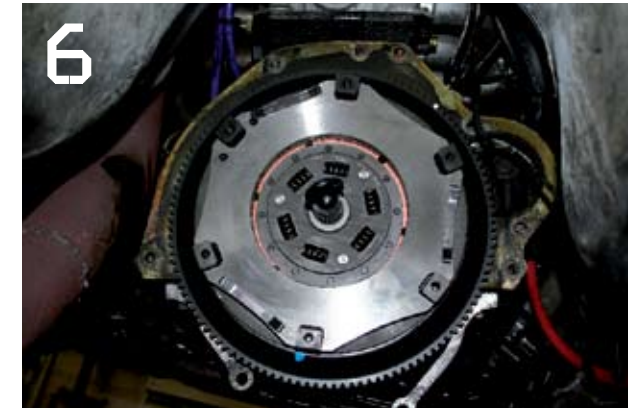
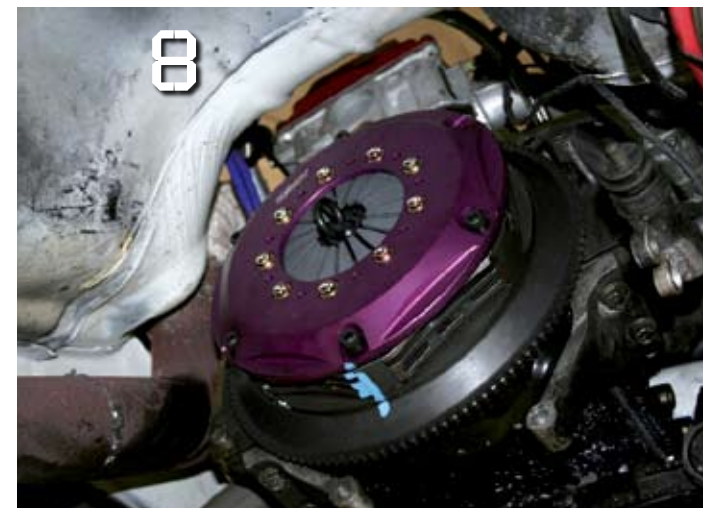
**7.** The second clutch plate can now be installed, and as with the first, it needed to be located with the special tool Exedy provides. Here you can see the tool is simultaneously locating both clutch plates through their centres

**8.** With all internal necessities fitted, we could now bolt up the clutch cover. Six allen-key bolts hold it in place. Thread locker was again used sparingly to hold them in place

**9.** With the clutch itself out of the way, it was now time to sort out the rest of the disengagement components. The carrier and throw-out bearing needed to be fitted to the sleeve that sits over the input spline, and a couple of light taps convinced them to do so

**10.** The location tool was then removed and the gearbox slotted into position. R33 Skyline gearboxes are very heavy, so the more pairs of arms we have at our disposal the better

**Despite the gearbox's 9.5in flywheel, the Hyper-Multi's clutch faces only measure in at around 8in. The smaller face makes the clutch far easier to operate, and with two faces, the kit still has a massive combined surface area**





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## EXEDY HYPER-MULTI TWIN PLATE

The clutch itself feels incredible and is a true credit to Exedy. Known as the Hyper-Multi Twin-Plate, it has a purposefully motorsport feel about it, yet being a twin plate means it retains drivability that a brass-button single plate could only dream of.

The drivability can be accredited not only to the clutch's twin-plate design, but also to the 'T5001' carbon metal facing. The carbon metal facing gives the Hyper-Multi's clutch faces greater heat resistance and a higher friction coefficient than other clutches, which allows Exedy to downsize the surface area of the clutch itself.

Usability, reliability and ultimately drivers are the winners in this case.



**11.** Before the bellhousing bolts were installed, we needed to quickly stick the dust covers back in. Following this, the slave cylinder was reattached to the gearbox itself

**12.** An extra-long ratchet extender makes light work of even the top-most bellhousing bolts

**13.** With the gearbox now firmly attached to both the motor and the crossmember, the tailshaft was fitted

**14.** The final step involving the hoist was to fill the gearbox with the appropriate gearbox fluid

**15.** With the car back on the deck, the starter motor and shifter were reinstalled. Showtime

The install went off without a hitch, and the instructions Exedy provided were extremely helpful. The clutch feels incredibly mechanical and aggressive, yet the pedal remains light enough to ensure daily driving would not be a problem.

The best part, though, is a complete absence of slip, which on its own justifies the retail price of just below \$2000. Exedy clutches are highly recommended and can be found at [www.exedy.com.au](http://www.exedy.com.au). **SC**