Submission to the Productivity Commission

Right to Repair

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I am aware that the first round of submissions were due by first February, but have only just become aware of the enquiry. I am hoping that notwithstanding this submission's timing it might be able to be considered by the Commission. I will be certainly making submission on the draft report once it is available.

By way of background, I started my working life in the late 1970s as an electrical mechanic working for an independent retailer and repair shop as well as (for a time) with Breville. I now work in the public sector in a completely unrelated field.

I have maintained my own appliances and vehicles over the years although this is becoming steadily more difficult for many of the reasons outlined in the Issues Paper. In this submission I would like to explore issues related to various elements of Right to Repair as have become apparent to me over the years.

I currently live in a remote area, Moree NSW, where the only licensed repair technician has now effectively retired and I have no access to even manufacturers approved repairers within a radius of about 3 ½ – four hours. This renders nearly any repair attempt uneconomic once the time and costs of travel are figured in.

Example 1 - Replacement only warranty

In this particular case a number of retailers do not offer the option to repair but instead any failure under warranty is replacement only. Aldi is particularly prone to this with no spare parts whatsoever being available through any channel that is able to be discovered by me. I have only on one rare occasion managed to identify the same product, branded differently, and been able to secure a part. The failure to supply any parts at all or any repair service at all contributes substantially to an increase in waste. In this particular case where repair services or parts are completely unavailable I have had to resort to making parts myself on occasion. While the value of the goods is not necessarily high, the repair option should still be available.

Example 2 - ability to access service information

I have had numerous battles with various manufacturers over the years in terms of obtaining access to service information. This includes anything from diagrams containing part position numbers through to wiring diagrams. Recently, when dealing with Dishlex, they told me quite bluntly that "all the service material was out in the field with technicians and they could not send me a copy of anything". I asked them what happened if they got a new licensed technician and they couldn't answer the question. They indicated the reason for not releasing the information was concern that I might repair the appliance myself. I was going to repair the appliance myself anyway however access to that information would have saved me time and, ironically, reduced risks. In this regard I would have had a better understanding of the circuit and its operation and less likelihood of making an error. As it turned out, I was able to successfully diagnose and repair the product. Although it is now 13 years old it is still perfectly competent as a dishwasher.

Fisher and Paykel have been a little bit better, and I have been able to obtain basic information about my washing machine. Again, this is an older appliance and when I first sought repairs or it it was only just out of warranty. The manufacturer tried very hard to sell me a new one rather than send a technician. The repair was quite straightforward and cheap (I was living in Melbourne at the time) and I set about obtaining service information. I obtained a wiring diagram and, most importantly, the ability to put the machine in diagnostic mode. The growth of computerisation within routine appliances has led to some very major benefits when it comes to repairs. Most modern appliances can now self-diagnose and in my experience with reasonably accurately. On this basis, access as to how to get the machine into diagnostic mode is critical at a consumer level as well as a repairer level. For example by getting the machine into diagnostic mode a consumer can discuss with a repairer of the codes indicated and therefore whether a repair is likely to be feasible. This can save the costs and time of a service call for an appliance that may or may not be repairable. In the case of the washing machine I have now undertaken three repairs all of which were successful but made quicker and easier through the diagnostic code because of reduced time for troubleshooting. This is critical from a commercial perspective where time is money in the repair game. You need to be able to repair cheap appliances very quickly. Labour cost is the main barrier to economically viable repairs.

Example 3 - parts not being labelled/colour-coded

I recently did a partial repair on a Haier refrigerator owned by a friend who also lives in a remote area. There is no service technician closer than four and a half hours. The manufacturer would not provide any service information whatsoever although I did find some information on the Internet after much searching. To make things more challenging the wiring harness was not colour-coded and therefore repairs involved a very laborious process of working out which wire was meant to connect with what in terms of the two main boards. With four of the seven wires broken, this was a challenge. I eventually troubleshot it sufficiently to get the fridge running but not sufficiently to get the display panel operating or the controls working. Eventually, the manufacturer did agree to sell a new wiring harness which was actually quite affordable but no help during a hot summer when you needed to make operational repairs quickly. The fridge broke down over the Christmas – New Year period. Again, an independent repairer could not afford the time “hit” to undertake this type of laborious troubleshooting. It took me about three hours to fully trace the circuits, map them out and work out how the boards connected. Commercially, that would be something like $200 in labour just to diagnose the problem. A colour coded wiring harness would have meant the job would take five minutes even in the absence of service information.

Increasingly, with electronic components within appliances, these components are often completely unlabelled. This includes common components such as transistors, capacitors, resistors and the like as well as more specialised components such as integrated circuits. This makes it extraordinarily difficult, in the absence of a full circuit diagram, to undertake any meaningful repair. One is limited to identifying components that are in physical distress and then having a guess as to what the values might be or even, sometimes, what the component actually is. In the case of partial destruction through, say, overheating of a resistor is usually possible to work out what it was and make some educated guesses as to why it overheated but again this is time. Failure to colour code harnesses (or at the very least have pinout information on the boards) and to properly label components is, in my view, sheer obstructionism on the part of manufacturers.

Example 4 - access to parts

The very rapid development of appliances with extremely frequent model changes and multiple running updates during a model run creates very many challenges in terms of maintaining an appropriate stock parts and supply network. In particular, subtle variations between parts in superficially identical models can create challenges. Sometimes a part from a slightly different model will work - sometimes it will not. There needs to be some systemic thought around reducing the number of operational production changes and undertaking better design and testing in the first place. I suspect that in practice most of the testing is "done in the field" with operational changes made to production based on failure rates in practice.

Often parts are available only from the manufacturer or an authorised service agent and they will not sell to an independent repairer or consumer. I have also found that purchasing as a consumer can significantly increase the cost. At times this can render a repair problematic. For instance with the dishwasher a new control panel moulding was over $200 from the manufacturer although I did locate one from a parts stockist firm for $106.

This also raises the issue of third-party parts providers. Within the automotive industry this is now comparatively common and, at times, a third-party part may be better quality than the OEM. With appliances it is less common although not unknown. My most recent repair to the washing machine utilised a third-party pump which has worked perfectly well.

I understand the issues around quality control of parts produced by others however given my very frequent experiences of new appliances failing under warranty because of one poorly designed part I don't think manufacturers can take the high ground on this one. At the end of the day an effective network of third-party repairers sourcing parts both from the manufacturer and third parties as appropriate would seem to me to be the best way to ensure that there is appropriate skill and safety applied irrespective of the source of parts. For example, I use a mega tester to check third-party parts for insulation integrity.

Example 5 - special service tools

I recently returned to service a 2000 Holden Astra which had been off the road for three or four years. It had a faulty fuel pump. I was able to access the vehicles diagnostics using the industry standard interface which assisted in troubleshooting. The problem came when I needed to replace the pump. No less than three special service tools are recommended for this job. Not being willing to spend a lot of money on a vehicle worth about $500 I was able to obtain a second hand pump for $35 and then needed to spend a day and a half manufacturing the special service tools to install it. Very few people would have the capability, knowledge or equipment to make their own tools. Yet simply because of intrinsic design, what should have been a 10 minute job took most of the weekend. The use of special service tools is exclusionary.

Example 6 - design for repairability

I think about my first vehicle, a 1974 Toyota Corona. It was very easy to purchase a full set of manufacturer workshop manuals which gave full details of repair and replacement of any part on the vehicle. Tools were straightforward and simple and the average mechanic would have virtually everything. Parts were readily available and affordable. Yes, it was quite simple machine but in terms of serviceability was excellent in terms of access, the ability to use common tools and the lack of special service tool requirements. Where an SST was required this tended to be more about convenience than about the ability to repair the vehicle.

Electronic and electrical appliances vary considerably in this regard. Quite often a marginal saving in terms of manufacturing costs makes an appliance difficult to repair. A recent example was an appliance which used pressed on connectors to connect the appliance wiring to the power cord. Of itself this would not normally be a problem except the wiring was so tight that it was not possible to cut the connector off and still have enough wire to apply fresh connectors once the power cord had been replaced. Fortunately, I had some of the high temperature silicon insulated wire which allowed me to replace part of the wiring harness the appliance and effect a repair. This is an increasingly common problem and can include items being glued or encapsulated where it doesn't appear necessary for appliance long life.

Example 7 - Access to software

I have a Canon multifunction machine (commercial quality) which, the cause of changing network technologies, needs a firmware update. Unfortunately I have been unable to either get the local Canon agent to do this or to source the information from Canon themselves. As a result, the machine no longer has effective network functionality although it will copy and print it will not scan without considerable workarounds being needed. The machine is now five years old which lower old in commercial terms given light usage means it should still have considerable design life left.

Another example is a network storage device produced by Netgear. Because of closure of a third-party website which they used for online access and authentication it is now no longer possible to access the machine if a password is lost. Thus a perfectly functional though older machine becomes useless because of this simple flaw. The ability to access a machine in the circumstances and to be able to address this issue in software (it runs a version of Linux) is a frustration.

This issue also arises with things such as mobile phones, and to a lesser degree notebook and desktop computers, where multiple operating system upgrades eventually mean that a machine cannot run the latest operating system even when perfectly functional. This exposes the machine to considerable security risk. Whilst strictly speaking not a matter of "repairability" it still comes into the same class of planned obsolescence.

A final case study in this area relates to agricultural machinery. Reports from local landholders indicate that in the case of some large tractors, harvesters and the like service information is only held by the manufacturer (John Deere) in the USA. Servicing this equipment is dependent on a live Internet connection to the actual machine to allow them to undertake remote diagnostics. In addition, the claims of intellectual property in software are used as an excuse to not permit third-party modification. Again, while it is accepted that in unskilled hands this could prove problematic there are no other alternatives in terms of being able to utilise someone local with appropriate skills.

Overall conclusions

1. It is accepted that the very low cost of many modern appliances makes economic repair challenging. This is particularly in the case when replacement appliance might cost $20 or $30. Nevertheless, even within a timeframe of 10 minutes with good design, proper information and affordable parts a repair might nevertheless be able to be economically effected.
2. **Design for repair** should be mandatory given the very small increase in production costs involved and the much greater service life obtainable and the significant reduction in waste streams that can also occur.
3. **Service information** should be readily available including, in particular, the ability to place a machine into diagnostic mode and also obtain wiring diagrams if not full circuit diagrams.

4. **Special service tool** usage should be minimised or, if unavoidable, these should actually be available to third-party repairers.
5. **Part availability** needs to be guaranteed for a significant proportion of the typical service life of the appliance with an end to replace only warranties. The ability of third parties to manufacture parts is seen as an important aspect of a competitive market.
6. **Manufacturer exclusivity** needs to be seen as a restraint on trade, in particular when it comes to service and repairs. It is not feasible for manufacturers to provide a suitably dense network of repair facilities nor is the licensed repairer system working effectively.
7. **Software and firmware** needs to be accessible and, at times, able to be modified/updated.