



# L.W. Bonney & Sons

## Bypass filtration trial summary

### STAGE ONE

Astrea bypass filtration units were fitted to two trucks running milk. A Mack (Mack E7 engine) based in the Waikato, and a Sterling (Detroit Series 60 engine), based in Northland. Prior to the Astrea trial, the schedule had oil and OEM filters being changed every 20,000kms, with each truck doing approximately 120,000kms annually.

The Stirling was fitted with the Astrea unit at 1,100,000kms. A base oil sample was taken – 1076 particles per 15mls of oil were present. Contamination was lowered to 358 particles per 15mls of oil.

Oil was changed after 86,000kms which represented a quadrupling of the oil drain intervals.

The Mack was fitted with an Astrea unit at 805,900kms. The initial oil sample indicated glycol in the oil. Oil drain extensions were continued as normal until the glycol was eliminated from the oil.

### STAGE TWO

Fifteen new Macks were purchased for the 2015/16 milk season. Astrea systems were fitted to all of these trucks to extend their component life and lower servicing costs.

### STAGE THREE

Our goal is to fit Astrea units to the rest of the fleet during the 2016 winter season.

### Results

Oil service intervals quadrupled from 20,000kms to 80,000kms.

Annual services reduced from 6 to 1.5.

Twice as clean after 60,000kms when compared with the initial sample.

Oil sampling identified coolant leak.

More than 39% saving per truck on oil serving costs.

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## Current oil servicing costs versus Astrea costs

		Yearly service costs
<b>CURRENT COSTS</b>		
Hours/kms per annum		120,000
Service every hours/kms		20,000
Services each year		6.00
<b>ENGINE OIL SERVICE COSTS</b>		
Engine oil cost per litre	\$8.50	\$1,785.00
Engine oil filters	\$80.00	\$480.00
Oil sampling	\$0.00	\$0.00
Labour	\$45.00	\$270.00
Total current costs		\$2,535.00
<b>ASTREA COSTS</b>		
Hours/km's per annum		120,000
Service every hours/kms		80,000
Services each year		1.50
<b>ENGINE OIL SERVICE COSTS</b>		
Engine oil cost per litre	\$8.50	\$446.25
Engine oil filters	\$80.00	\$120.00
Oil sampling	\$50.00	\$300.00
Labour	\$45.00	\$67.50
Filter change	\$99.00	\$594.00
Total Astrea costs		\$1,527.75
Savings per truck each year		\$1,007.25

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