



# ISX and Signature EGR. With Gen II improvements.



# ISX and Signature for ADR80/03.



Confirming its technological leadership, Cummins has chased down diesel engine emissions to near-zero levels while maintaining proven customer value.

For ADR80/03 emissions levels, one of Cummins' technology offerings with 15-litre ISX and Signature engines is cooled exhaust gas recirculation (EGR) incorporating a diesel particulate filter (DPF).

As part of Cummins' commitment to continuous product improvement, the EGR engines feature evolutionary Gen II upgrades to further enhance reliability, durability, performance and fuel economy.

As the only diesel engine manufacturer with complete in-house integration of all critical subsystems from air handling to exhaust aftertreatment, Cummins is able to offer this technology choice for emissions reduction while providing lowest cost ownership.

Cooled EGR is a self-contained subsystem with no changes to the proven base 15-litre engine design.

There are no hardware changes from 485 hp/1850 lb ft to 600 hp/2050 lb ft, and all ratings deliver best-in-industry engine brake performance of 600 retarding horsepower, Cummins' sliding-nozzle VG turbocharger is a 'no wastegate/no adjustment' design while providing precise boost control and improved driveability.

## Specifications.

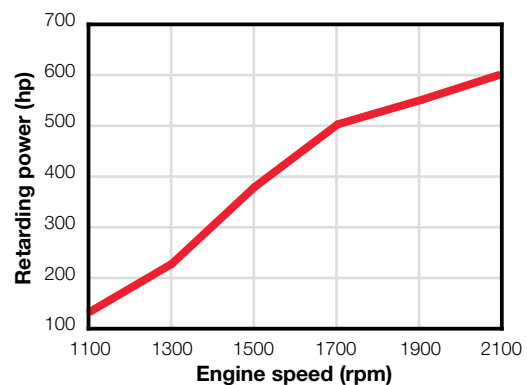
Type	4-cycle, in-line, 6-cylinder, turbocharged/charge air cooled
Bore & stroke	137 x 169 mm (5.39 x 6.65 in)
Displacement	15 litres (912 cu in)
Compression ratio	17:1
Oil system capacity	49.2 litres
Dry weight	1365 kg (3009 lb)

## Industry-leading engine brake performance.

Cummins ISX and Signature EGR engines deliver 600 braking horsepower at 2100 rpm – regardless of their horsepower rating\*.

This level of braking power is the same as the industry benchmark established by the pre-EGR Cummins Signature engine. However, the EGR engines have a significant improvement in mid-rev range braking power.

\* ISX Fleet 450 retards 500 hp at 2100 rpm.



## Diesel Particulate Filter (DPF).

The DPF, which replaces the existing vehicle muffler, is designed to last the life of the engine. The only maintenance requirement is to remove ash from the filter which is a result of filter operation and regeneration.

Cleaning maintenance intervals are up to 500'000km/250'000 litres fuel burn depending on the application.

The filter needs to be removed from the vehicle for cleaning, with Cummins ReCon exchange units available from Cummins branches and dealers for quick turnaround.

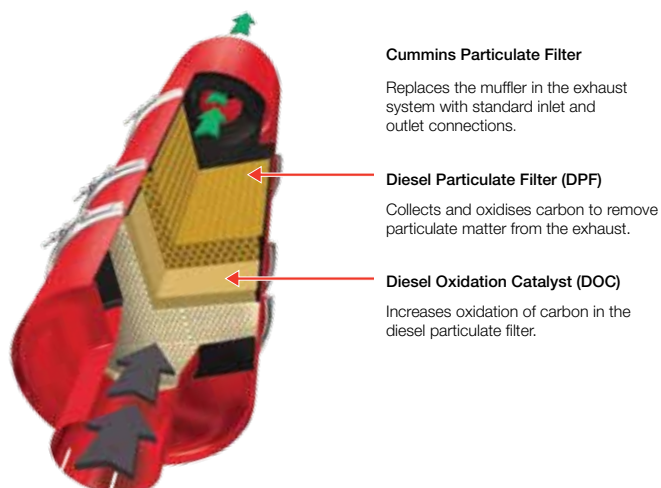
Compared with a conventional muffler, the DPF adds around 40 kg to the weight of the vehicle, depending on the type of installation.

## How it works.

The DPF incorporates a diesel oxidation catalyst and a diesel particulate filter to reduce NOx and particulate matter (soot) emissions.

Exhaust gases enter the DPF and pass through the diesel oxidation catalyst where chemical reaction neutralises the NOx emissions. The gases then flow into the diesel particulate filter where the particulate matter, or soot, is collected on the walls of the filter. The carbon (soot) collected is then oxidises to remove it from the filter.

**This process is called regeneration.**



There are two forms of regeneration:

■ **Passive regeneration:** Occurs automatically when the vehicle's duty cycle and exhaust temperature drive the continuous oxidation of carbon. No actions are required by the engine or operator to keep the particulate filter clean.

In typical Australian B-double and linehaul operations, passive regeneration is expected to occur around 95% of the time.

■ **Active regeneration:** Occurs when the duty cycle does not generate enough heat to convert all the carbon being collected in the particulate filter.

In this case, the engine ECM initiates an active regeneration by injecting a small amount of diesel into the exhaust stream which generates heat as it enters the filter. This additional heat ensures that excess carbon is oxidises without any operator intervention.

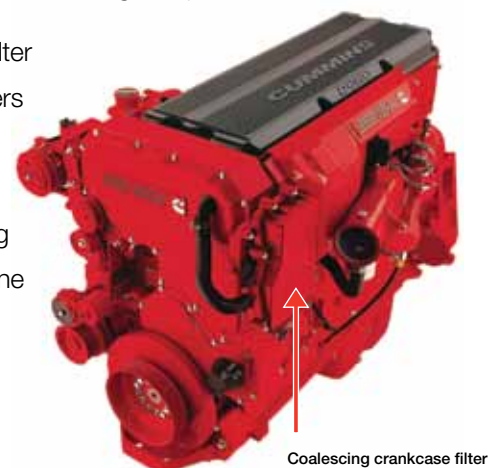
## Crankcase ventilation.

Another new filter operators will see on their ADR80/03 ISX and Signature engines is what's known as a coalescing crankcase filter.

This simple, easy to service filter is required because crankcase gases count towards the total emissions output from an engine.

Crankcase gases can include fine oil droplets or oil mist during normal engine operation.

The coalescing filter captures and filters these crankcase emissions and requires changing every fourth engine oil change.

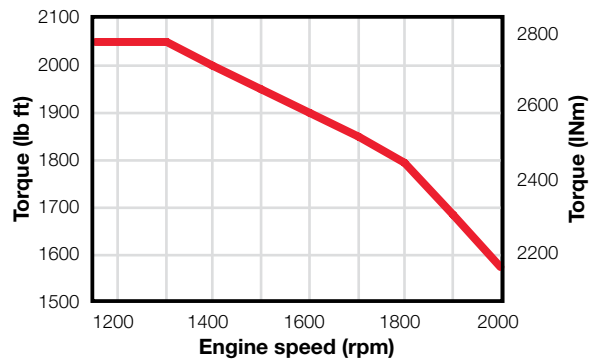
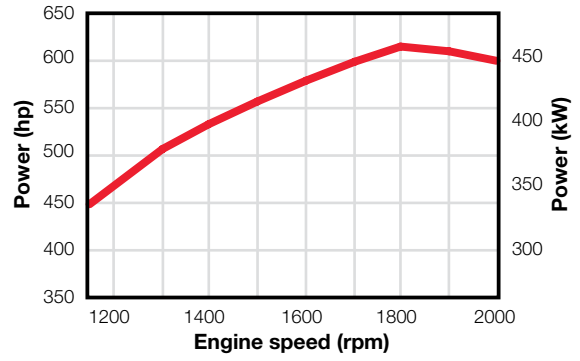


# Signature 600

## Performance curves.

600 hp @ 2000 rpm  
 2050 lb ft @ 1150 - 1300 rpm

RPM	POWER		TORQUE	
	hp	kW	lb ft	Nm
1150	449	335	2050	2779
1200	468	349	2050	2779
1300	507	378	2050	2779
1400	533	397	2000	2712
1500	557	415	1950	2644
1600	579	432	1900	2576
1700	599	447	1850	2508
1800	615	459	1795	2434
1900	610	455	1685	2285
2000	600	447	1576	2137

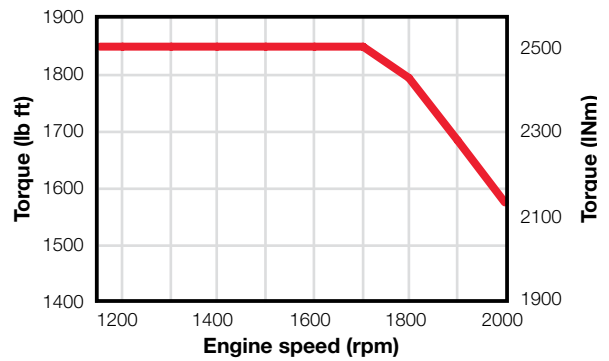
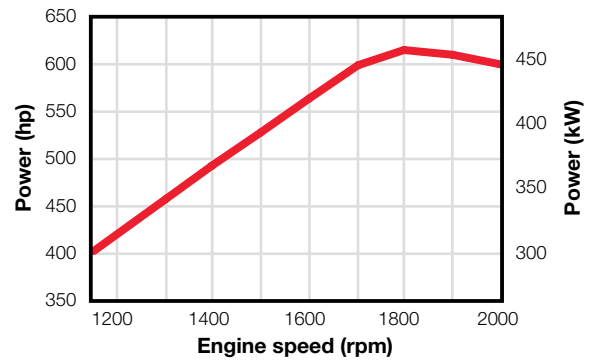


# ISX 600

## Performance curves.

600 hp @ 2000 rpm  
 1850 lb ft @ 1150 - 1700 rpm

RPM	POWER		TORQUE	
	hp	kW	lb ft	Nm
1150	405	302	1850	2508
1200	423	315	1850	2508
1300	458	342	1850	2508
1400	493	368	1850	2508
1500	528	394	1850	2508
1600	564	421	1850	2508
1700	599	447	1850	2508
1800	615	459	1795	2434
1900	610	455	1685	2285
2000	600	447	1576	2137

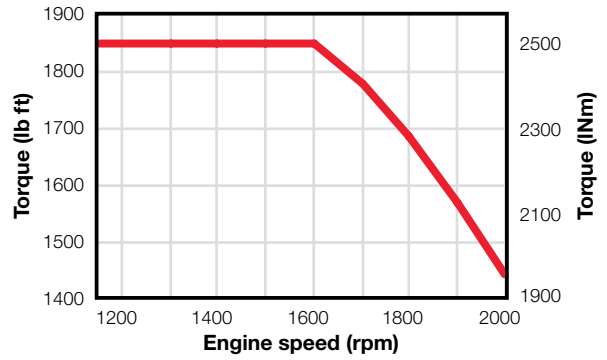
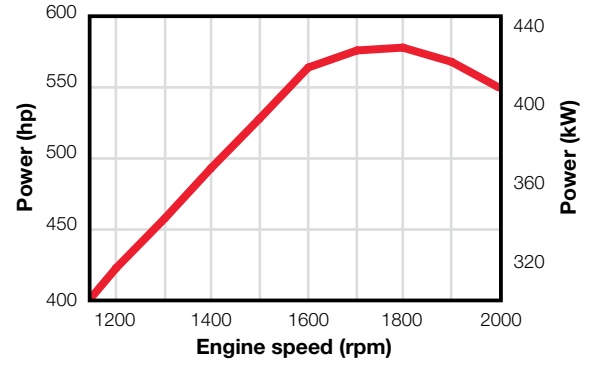


# ISX 550

## Performance curves.

550 hp @ 2000 rpm  
1850 lb ft @ 1150 - 1600 rpm

RPM	POWER		TORQUE	
	hp	kW	lb ft	Nm
1150	405	302	1850	2508
1200	423	315	1850	2508
1300	458	342	1850	2508
1400	493	368	1850	2508
1500	528	394	1850	2508
1600	564	421	1850	2508
1700	576	430	1779	2412
1800	578	431	1687	2287
1900	568	424	1570	2129
2000	550	410	1444	1958

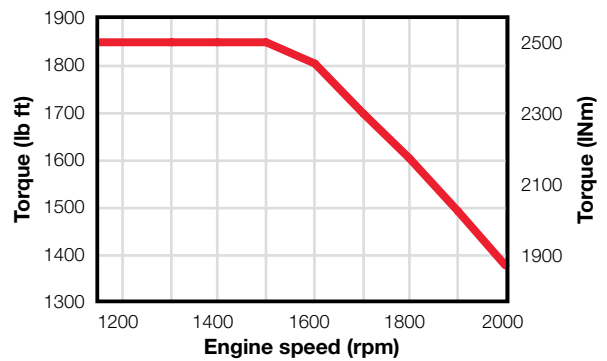
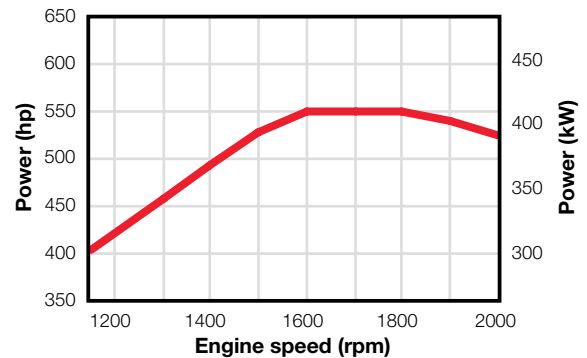


# ISX 525

## Performance curves.

525 hp @ 2000 rpm  
1850 lb ft @ 1150 - 1500 rpm

RPM	POWER		TORQUE	
	hp	kW	lb ft	Nm
1150	405	302	1850	2508
1200	423	315	1850	2508
1300	458	342	1850	2508
1400	493	368	1850	2508
1500	528	394	1850	2508
1600	550	410	1850	2447
1700	550	410	1699	2304
1800	550	410	1605	2176
1900	540	403	1493	2024
2000	525	391	1379	1870

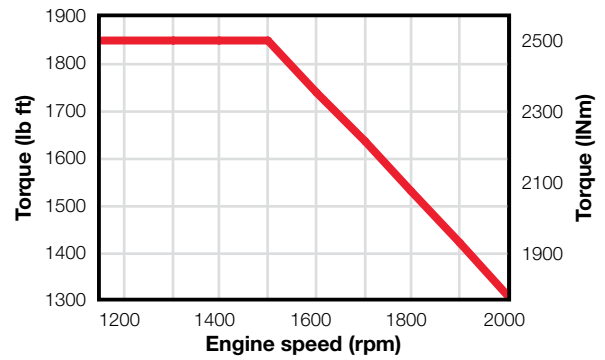
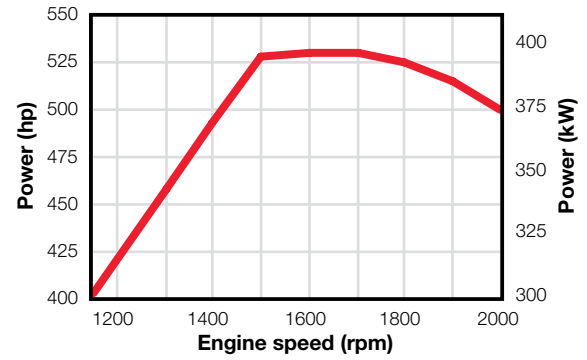


# ISX 500

## Performance curves.

500 hp @ 2000 rpm  
1850 lb ft @ 1150 – 1500 rpm

RPM	POWER		TORQUE	
	hp	kW	lbft	Nm
1150	405	302	1850	2508
1200	423	315	1850	2508
1300	458	342	1850	2508
1400	493	368	1850	2508
1500	528	394	1850	2508
1600	530	395	1740	2359
1700	530	395	1637	2219
1800	525	391	1532	2077
1900	515	384	1423	1929
2000	500	373	1313	1780

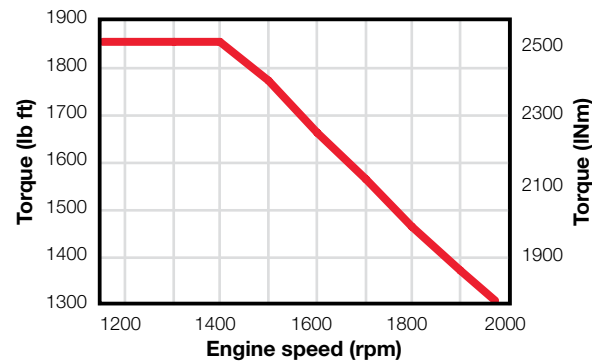
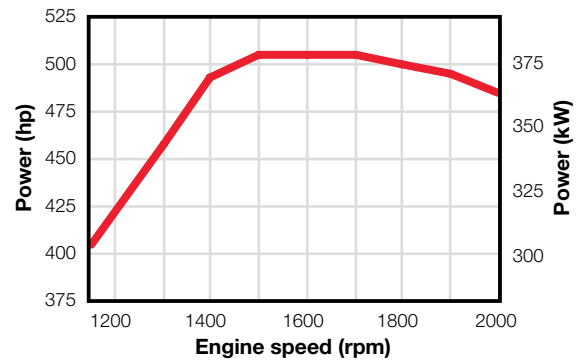


# ISX 485

## Performance curves.

485 hp @ 2000 rpm  
1850 lb ft @ 1150 – 1400 rpm

RPM	POWER		TORQUE	
	hp	kW	lb ft	Nm
1150	405	302	1850	2508
1200	423	315	1850	2508
1300	458	342	1850	2508
1400	493	368	1850	2508
1500	505	377	1768	2397
1600	505	377	1658	2248
1700	505	377	1560	2115
1800	500	373	1460	1979
1900	495	369	1367	1853
2000	485	362	1274	1757

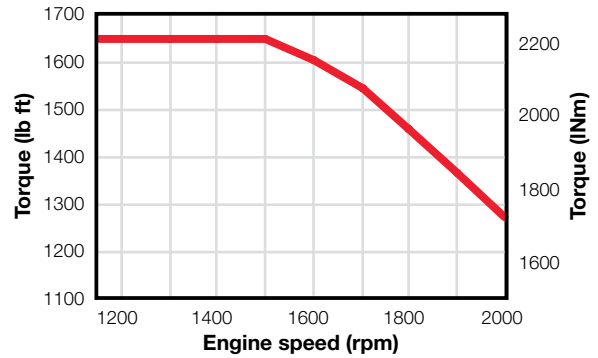
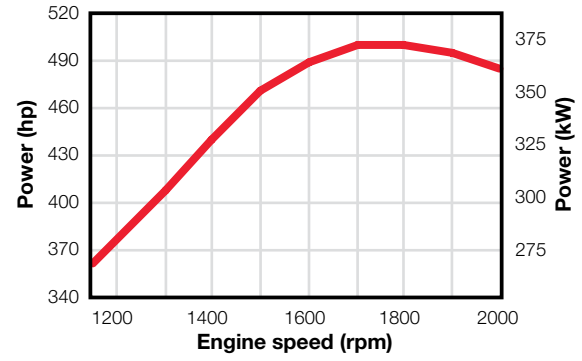


# ISX 485

## Performance curves.

485 hp @ 2000 rpm  
1650 lb ft @ 1150 – 1500 rpm

RPM	POWER		TORQUE	
	hp	kW	lb ft	Nm
1150	361	269	1650	2237
1200	377	281	1650	2237
1300	408	304	1650	2237
1400	440	328	1650	2237
1500	471	351	1650	2237
1600	489	365	1605	2176
1700	500	373	1546	2096
1800	500	373	1460	1979
1900	495	369	1367	1853
2000	485	362	1274	1727

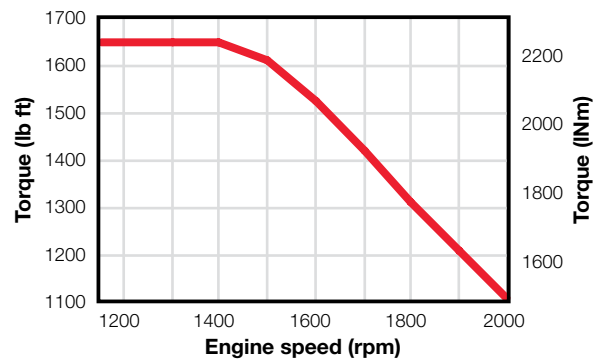
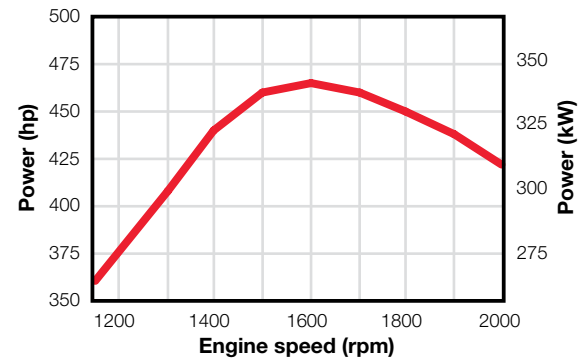


# ISX Fleet 450\*

## Performance curves.

450 hp @ 1800 rpm  
1650 lb ft @ 1150 – 1400 rpm

RPM	POWER		TORQUE	
	hp	kW	lb ft	Nm
1150	361	269	1650	2237
1200	377	281	1650	2237
1300	408	304	1650	2237
1400	440	328	1650	2237
1500	460	343	1612	2186
1600	465	347	1526	2069
1700	460	343	1421	1927
1800	450	336	1313	1780
1900	438	327	1210	1641
2000	422	315	1107	1501



\* The Fleet 450 can't be electronically updated to higher power and torque settings. The engine has stand-alone hardware that is specifically tuned to achieving top fuel economy at the 450 hp setting.





## Warranty coverage.

Cummins' base engine coverage\* is 2 years or 402,336 km, whichever occurs first. It covers:

- Full parts and labour on warrantable failures.
- Travel or towing when an engine is disabled by a warrantable failure or further operation would cause damage (from date of delivery through the first year).
- Consumables not reusable due to covered failure.
- No deductibles.

There is also major components coverage of 5 years, 804,672 km, or 12,500 hours whichever occurs first.

\*Plan covers defects in materials or factory workmanship.

## Extended coverage program.

As the industry leader for coverage and value, Cummins offers an extended warranty program called Warranty Plus. A competitively-priced program, it provides coverage for up to five years, 18,000 hours, 600,000 litres of fuel, or 1,200,000 km (whichever occurs first). Importantly, we can tailor the Warranty Plus program specifically to your application. Contact your local Cummins branch or Cummins truck dealer for pricing and full terms and conditions.



**The Cummins Support Centre boasts a team of highly experienced service technicians who are based at a dedicated facility in Melbourne.**

For Australia

**1300Cummins**  
Ph 1300 286 646

For New Zealand

**0800Cummins**  
Ph 0800 286 646

## Customer Support - Every place you need it.

Cummins has the most comprehensive service support network in Australia and New Zealand with 38 branches, 170 authorised dealers, and more than 240 field service vehicles linked by GPS for fast response.

In addition, customers can call the Australian-based Cummins Support Centre any time of the day, any day of the year, for breakdown assistance or technical advice. All you need to do is ring a single number – 1300 CUMMINS (if you're in Australia) or 0800 CUMMINS (if you're in New Zealand) – and you can speak directly to a highly experienced Cummins service technician.

With Cummins you're not just buying an engine, you're buying a partnership with all the support, services and parts you need.

## Everywhere. Cummins locations.

### AUSTRALIA

#### New South Wales

Grafton	02 6641 1000
Leeton	02 6953 3077
Muswellbrook	02 6541 0611
Newcastle	02 4964 8466
Orange	02 6360 2777
Queanbeyan	02 6297 3433
Sydney	02 9616 5300
Tamworth	02 6765 5455

#### Tasmania

Devonport 03 6424 8800

#### Victoria

Campbellfield	03 9357 9200
Laverton	03 8368 0800
Mildura	03 5022 0800
Pakenham	03 5943 3700
Swan Hill	03 5033 1511
Wodonga	02 6024 3655

#### Northern Territory

Darwin 08 8947 0766

#### Queensland

Brisbane	07 3710 4700
Cairns	07 4035 2999
Cloncurry	07 4742 0088
Emerald	07 4983 9000
Mackay	07 4952 8100
Toowoomba	07 4633 7627
Townsville	07 4774 7733

#### Western Australia

Bunbury	08 9725 6777
Geraldton	08 9964 5449
Kalgoorlie	08 9080 1300
Karratha	08 9144 4646
Perth	08 9475 8777
Port Hedland	08 9174 3200

### NEW ZEALAND

Auckland	09 277 1000
Bay Of Plenty	07 345 6699
Palmerston Nth	06 356 2209
Whangarei	09 438 8892

#### South Australia

Adelaide	08 8368 4300
Mount Gambier	08 8725 6422
Port Lincoln	08 8683 1967

### PAPUA NEW GUINEA

Lae	05 472 3699
Port Moresby	05 323 2471



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