

The air-cooled engine's most serious drawback is power loss caused by overheating. In addition to power loss, heat robs oil of its lubricating ability, and wear accelerates dramatically as operating temperatures go up. Temperatures increase especially whenever air flow through head and cylinder fins is slow in relation to the speed of the engine. In street bikes this occurs while idling at stop signals, creeping in heavy traffic, laboring up grades, and riding in tail winds. Dirt bikes are even more prone to overheating because they are geared lower, generally move at a slower pace in relation to engine rpm, and must pull harder through sand, mud, hills and other natural slowing conditions.

Webco cylinder heads provide direct, noticeable increases in horsepower and torque; but, even more important, Webco heads maintain higher performance levels longer than stock heads by protecting engines against overheating. Power and torque are relatively easy to increase. After more than 20 years' experience, Webco engineers are past masters at improving volumetric efficiency, which is the key to better performance. It is much more difficult to boost **thermal efficiency**, or the engine's ability to get rid of heat. Webco accomplishes this through proven head designs that are cast from prime 356 aluminum, sand blasted for porosity and improved heat dissipation, heat treated, gun-koted (Gun-kote is a special heat-dissipating black finish), and finally machined



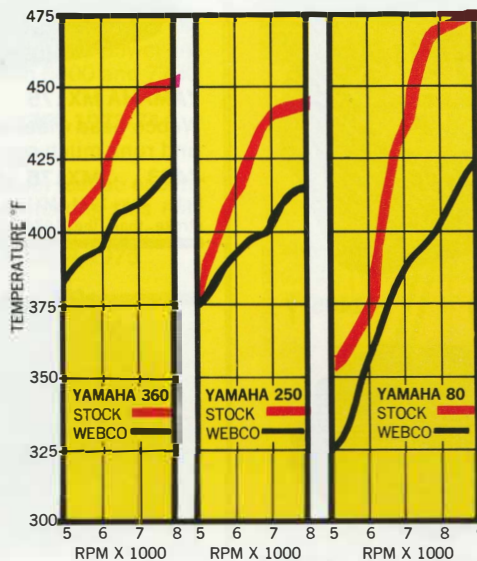
Webco Cylinder Heads Boost Performance Two Ways

to individual combustion chamber specifications. Fin layouts vary from one model to another, depending on individual air flow requirements, and additional fins are cast underneath each head in order to better cool the top of the barrel and combustion chamber.

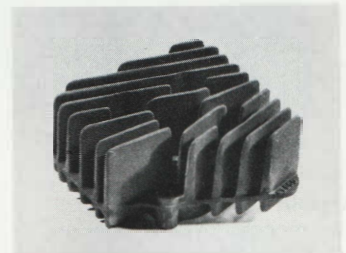
Although we use a dyno as a tool in developing better head designs, we emphasize that dyno charts alone mean nothing without considering temperature control and extended-operation performance. As the accompanying temperature charts show, heat rise is a direct function of rpm at static air flow. The faster the engine runs, the hotter it gets. Most air-cooled engines commonly reach the 400°F range, which is a definite danger zone as far as production Japanese two-strokes are concerned. At somewhere between 480 and 490°F it's all over; the engine seizes and sometimes even destroys itself.

Webco heads are far more valuable than their modest cost, because in the twilight zone above 400°, a Webco head reduces temperatures between 30 and 70°F. That's enough to make the difference between going and stopping. Several dyno charts are shown for comparison purposes, but always bear in mind that **Webco heads sustain power longer in any engine**, in addition

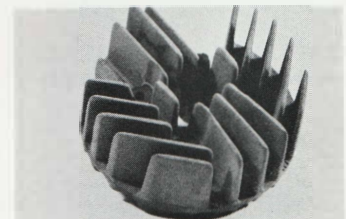
to whatever raw horsepower and torque benefits they may provide.



THERMAL EFFICIENCY. As engine speed rises, so does the temperature. Holding heat down extends engine performance and maintains horsepower for more useful periods of time, especially in the 400°F twilight zone



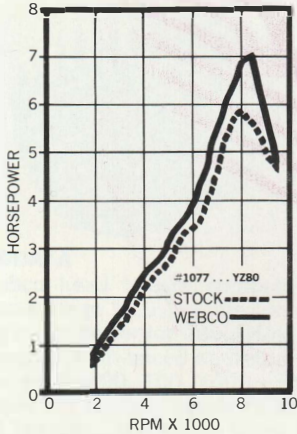
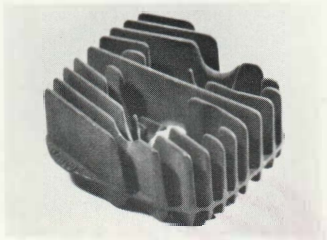
58cc JT1, JT2



72cc GT1

YAMAHA Mini Enduro
Webco head increases rear wheel output about 8%, while cooling these small engines much better. Plugs foul less and rings last longer.
#2368 . . . 72cc GT1
#1512 . . . 58cc JT1, JT2

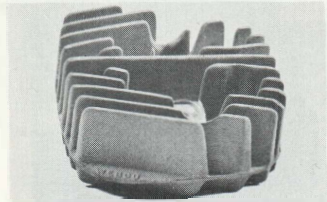




YAMAHA YZ80

Power chart tells the story: the Webco head gives engine a big boost between 8000 and 9000 rpm. Operating temperatures are reduced approximately 50° below stock.

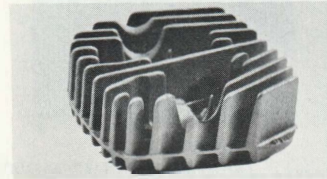
#1077 . . . YZ80



YAMAHA 90cc HT1

With modest (1mm) exhaust port filing, Webco head gives a big boost in power, while running much cooler than stock head.

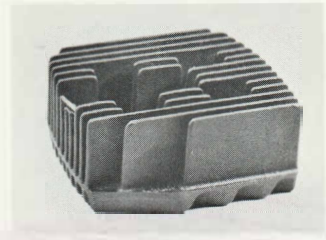
#2135 . . . 90cc HT1



YAMAHA 100cc LT2

Webco head increases power 10.5% across the power band from 4500 to 9000 rpm, and runs much cooler than stock head.

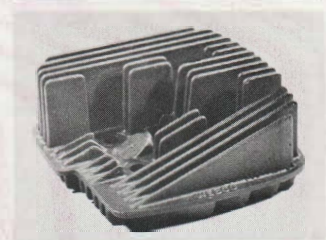
#2000 . . . 100cc LT2



YAMAHA AT1, AT2

Webco head widens power band and runs much cooler.

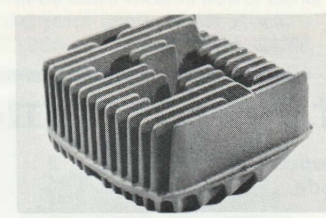
#2064 . . . 125cc AT1, AT2



YAMAHA MX125

Webco head improves power band from 2000 to 9000 rpm and eliminates erratic power surges.

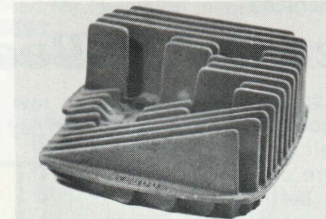
#1081 . . . MX125 1974-75



YAMAHA DT175A

Webco head provides a much fatter torque curve between 5000 and 6500 rpm, with horsepower boosts all the way to 7500 rpm.

#268 . . . DT175A 1974

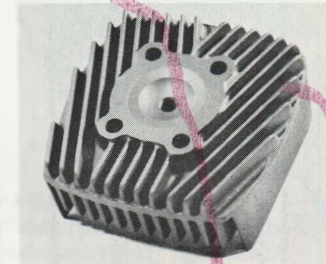


YAMAHA MX175

Webco head widens power band and runs much cooler.

#483 . . . MX175 1974-75

Note: The 1974 MX175 has a longer stroke than the 1974 DT175.



#1097 ↑

#1405 ↓

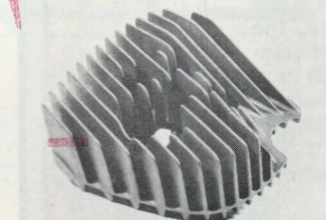


YAMAHA YZ125

Webco head widens power band and runs cooler than stock head.

#1097 . . . YZ125 thru 1976

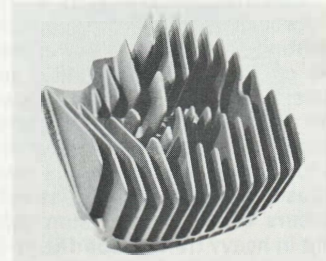
#1405 . . . YZ125D 1977



YAMAHA DT1, DT2

For enduro models, Webco head makes the old reliable DT1 250 even more reliable. Power and torque are boosted significantly because of moderate stock state of tune.

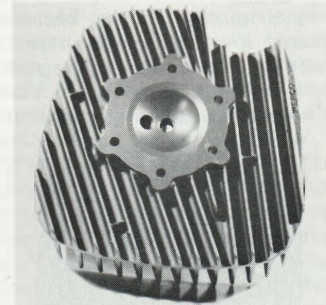
#1843 . . . DT1, DT2 Enduros



YAMAHA CT1, CT2

Webco head boosts performance dramatically, while running much cooler than the stock head.

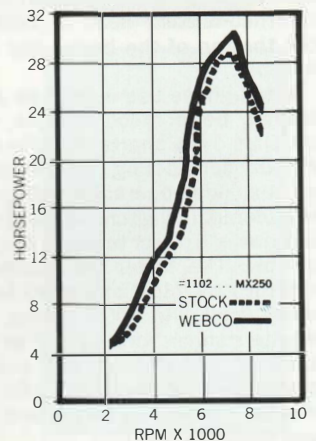
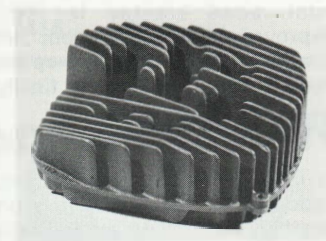
#2063 . . . 175cc CT1, CT2



YAMAHA MX250

Webco head boosts power from 300 rpm, peaks at 7500 broadens power curve the most from 5500 to 8000 rpm.

#2367 . . . MX250 1973-75



YAMAHA MX/YZ250

Up pipe and monoshock limit space for head. Webco head's increased mass reduces temperatures at all speeds for prolonged life and periods of useful power.

#1102 . . . MX250 1975,

YZ250 1976

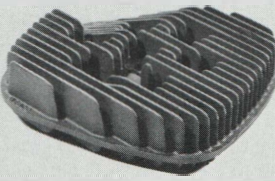




YAMAHA YZ250

Stock head runs hot because of up pipe and monoshock space limitations. Webco head's increased mass significantly reduces temperature at all speeds.

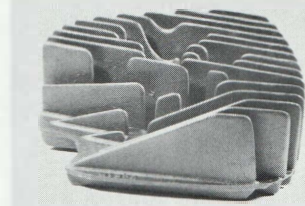
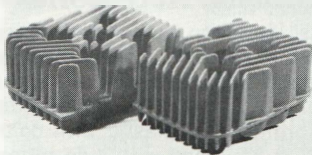
#1409 . . . YZ250D 1977



YAMAHA IT250

Webco head's increased mass significantly boosts torque and cooling capacity, especially beneficial because of space limitations over stock head created by pipe and monoshock.

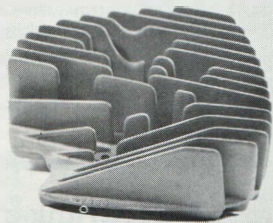
#1412 . . . IT250 1977



YAMAHA 360 ENDURO

Webco head shows a significant improvement in power and cooling.

#1609 . . . 360 Enduro 1974



YAMAHA MX360

Webco head provides an especially broad-range power increase between 5800 and 7700 rpm.

#2366 . . . MX360 1973-74

YAMAHA DT400

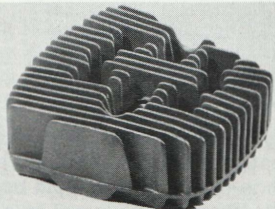
Maximum power boost occurs at 5000 rpm, making this machine a super stump-puller.

#1310 . . . DT400B 1975

YAMAHA RD350

Twin Webco heads boost power modestly throughout all rpm ranges from 3000 to 9000, while reducing heat drastically.

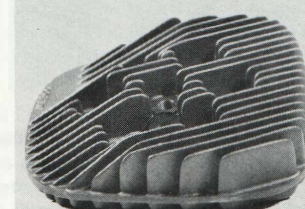
#1112 . . . RD350 (per pair)



YAMAHA RT1-2-3

Webco head shows a significant improvement in power and cooling.

#2011 . . . 360 RT1-2-3 enduros



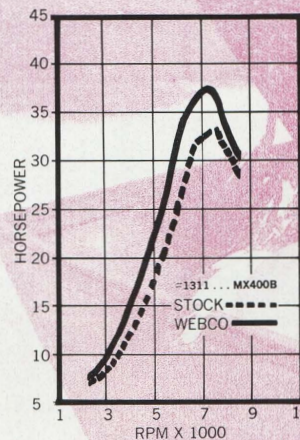
YAMAHA IT400

Webco head retains broad-range power and torque through sand, mud, hills and rock piles.

#1413 . . . IT400D 1977



www.legends-yamaha-enduros.com



YAMAHA MX/YZ400

Awesome power and torque last longer with a Webco head.

#1311 . . . MX400B 1975, YZ400C 1976

#1410 . . . YZ400D 1977

