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Back in 2001, as you're likely to remember, *Automotive Rebuilder* took the radical step of changing our identity to *Engine Builder*, the magazine you're reading now. The decision to do so was not made lightly, but was the result of careful realization that we couldn't be all things to everyone in the entire rebuilding industry.

But while our focus was narrowed to engines, it has also expanded to fit more than just traditional passenger car and light truck builds. As, of course, has yours. The bulk of *Engine Builder's* circulation has, by necessity, diversified into a variety of other markets, and that diversification has been seen by the incredible number of markets our readers are involved with.

As we discussed in Part 1 of the Machine Shop Market Profile (*Engine Builder*, June 2007, page 32) engine builders continue to make the changes they need to in order to be competitive. Some of those changes have been very difficult, for builders, suppliers and customers alike. Yet we continue to have the belief that many of the shops in business today have made or understand that they will soon need to make changes to remain viable in this tough market. There's just no way to remain competitive in tomorrow's industry using yesterday's business model.

The June issue of *Engine Builder* featured Part I of our annual Machine Shop Market Profile, which read almost like a Charles Dickens novel: "It was the best of times, it was the worst of times.." We presented information concerning all types of production data, looking at average monthly engine, head and crankshaft production, core sourcing, analysis of shop equipment ownership, previous equipment purchases and future buying intentions, as well as the percentage of production time spent in specific areas of engine disassembly, cleaning, machining and reassembly.

In this issue, we're taking a look, we'll examine financial data, size of shop, years in business, employee information and customer-base analysis of the typical custom engine rebuilder (CER).

As we stated last month, we feel the numbers generated by the 2007 Machine Shop Market Profile are as pristine and reliable as possible. For more than 20 years, we have been surveying this same segment of the engine rebuilding population. Consequently, data contained in this study reflects the most accurate trending information available to CERs and their suppliers.

Information contained in our study represents data for production year 2006. *Engine Builder* audited circulation figures show a total of 17,905 engine builder/rebuilder/remanufacturer locations. In our estimation, about a third of these – or about 6,000 – are full-service automotive machine shops and engine builders capable of doing any type of machine work. The rest may be rebuilders with limited shop equipment, buying and installing parts, doing the machine work they can while jobbing out other service operations that they can't easily perform.

Based on a universe of 4,000-

MSMP Machine Shop Market Profile

SHOP SALES PROFILE

2007 GROSS SALES VOLUME (PARTS & LABOR)

GROSS SALES VOLUME	2007	2006	2005	2004
LESS THAN $250,000	50.0%	50.0%	54.3%	48.1%
$250,000 - $499,999	22.0%	24.7%	18.5%	23.5%
$500,000 - $749,999	11.4%	7.2%	10.3%	9.1%
$750,000 - $999,999	6.4%	6.6%	4.1%	4.8%
$1 - $1.5 MILLION	5.3%	4.1%	3.7%	7.2%
$1.5 - $2 MILLION	2.3%	2.5%	2.1%	2.4%
$2 - $2.5 MILLION	0.4%	1.3%	2.5%	0.5%
MORE THAN $2.5 MILLION	2.3%	3.8%	4.5%	4.3%
AVERAGE	$506,098	$536,292	$556,533	$558,778

2007 GROSS SALES VOLUME COMPARISON

	2007	2006	2005	2004
INCREASED	32.1%	40.2%	37.5%	30.5%
REMAINED THE SAME	37.0%	33.2%	33.3%	36.0%
DECREASED	30.9%	26.6%	29.2%	25.0%

PERCENT CHANGE IN GROSS SALES VOLUME

THOSE REPORTING AN:	INCREASE	DECREASE
UP TO 10%	66.7%	49.4%
11 - 20%	22.6%	31.3%
21 - 30%	6.0%	13.3%
31 - 40%	0.0%	3.6%
41% OR HIGHER	4.8%	2.4%
AVERAGE 2007	12.3%	14.3%
AVERAGE 2006	13.0%	14.7%
AVERAGE 2005	12.6%	10.2%

GROSS SALES VOLUME ATTRIBUTED TO MACHINE SHOP PARTS & LABOR WORK

PERCENT OF SALES VOLUME	2007	2006	2005	2004
UP TO 10%	5.5%	6.8%	7.2%	7.3%
11 - 20%	5.1%	6.5%	5.9%	5.6%
21 - 30%	7.9%	5.2%	3.8%	5.4%
31 - 40%	2.8%	4.2%	6.8%	5.9%
41 - 50%	7.5%	4.9%	6.3%	8.8%
51 - 60%	3.6%	5.2%	4.2%	4.2%
61 - 70%	2.4%	3.6%	5.1%	3.4%
71 - 80%	8.7%	5.8%	7.6%	7.3%
81 - 90%	8.3%	6.0%	4.6%	6.8%
91% OR MORE	48.2%	51.6%	48.5%	45.2%
AVERAGE	74.1%	74.0%	72.5%	71.1%
PERCENT CHANGE	0.1%	2.1%	2.0%	1.2%

6,000 full-service automotive machine shops, this market segment built 720,000 to 1.08 million gas and diesel engines engines during production year 2006. During production year 2005 the national average for the CER market in gas and diesel engine production ranged between 816,000 to 1.22 million units.

Adding in the estimated 600,000 engines remanufactured annually by approximately 40 U.S. production engine remanufacturers (PERs), would place the combined total number of engines rebuilt in 2006 by CERs and PERs at 1.32 million to 1.68 million units. This compares to approximately 1.52 million to 1.92 million engines produced by PERs and CERs during production year 2005.

At an average retail cost of $2,600 per engine, that indicates the machine shop market generated between $3.43 billion and $4.37 billion in rebuilt engine sales in 2006.

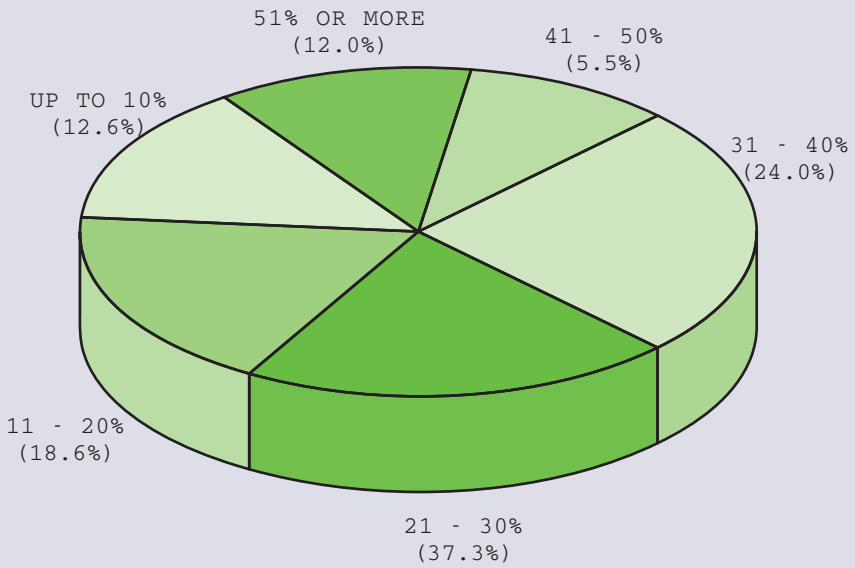
While down from 2005, those numbers, as they say, aren't anything to sneeze at. It's obvious that there's still money to be made in this industry – the key is to set your business up properly to weather the hard times and capitalize on the positives.

Average total gross sales volume in 2005 were down, slipping about 36 percentage points from the year previous. But while down generally, this year's numbers still show growth in some segments. Sales volume (including parts and labor) for the average shop was $536,292 in 2006, down from $556,533 in 2005, a drop of more than $20,000.

MSMP Machine Shop Market Profile

SHOP SALES PROFILE

2006 GROSS PROFIT MARGIN ON MACHINE SHOP PARTS AND LABOR



2007 AVERAGE: 31.4% 2006 AVERAGE: 33.6% 2005 AVER-

2007 GROSS PROFIT MARGIN COMPARISON

PERCENT OF SHOPS WHOSE PROFITS:

	2006	2006	2005	2004
INCREASED	16.7%	23.1%	21.5%	20.8%
REMAINED THE SAME	60.8%	57.8%	58.4%	58.8%
DECREASED	22.5%	19.0%	20.1%	20.4%

PERCENT CHANGE IN GROSS PROFIT MARGIN*

RANGE SHOPS SEEING:	INCREASE	DECREASE
UP TO 10%	75.0%	67.4%
11 - 20%	25.0%	21.7%
21 - 30%	0.0%	6.5%
31 - 40%	0.0%	2.2%
41% OR HIGHER	0.0%	2.2%
AVERAGE	7.7%	12.6%

PRETAX PROFIT

	2007	2006	2005	2004
AVERAGE	$43,001	$43,754	$43,099	$53,022
MEDIAN	$28,000	$25,000	$25,000	$29,569
PERCENT CHANGE	-1.7%	1.5%	-18.7%	34.6%

*To read the middle table above, follow this example: about 75% of shops who saw an increase in profit margin saw an increase of 10% or

In 2006, decreases in sales volumes were seen at the lowest end of the scale – less than $250,000 in sales – and at the high end – $2 to $2.5 million. Yet in the shops reporting annual sales volumes of between $250,000 and $2 million, (especially in the $250,000-$499,999 range) results were generally positive.

Across the board, the average increase in business for those shops reporting an increase tallied 13.0%, up from last year's survey. The average decrease (for those shops reporting a decrease in gross sales) also rose, however, jumping to 14.7 percent, reversing a trend that we had watched for the past several years.

According to respondents, in 2006 machine shop parts and labor work accounted for an average of 74 percent of shops' gross sales volume. This is an increase of more than 2 percent, a number that continues to climb. During the same period, the national average gross profit margin on machine shop parts and labor stayed even with the previous year's number. The 2006 figure is 33.6 percent. Yet, last year, 23.1 percent of responding shops said their gross profits increased, up from 21.5 percent in 2005. The percent whose profits decreased was down almost a full percentage point from 2005.

Overall, the average increase in gross profit margins in 2006 (according to those who reported an increase) was 8.0 percent; the average decrease in gross profit was 10.4 percent.

Pretax profits rebounded somewhat this year as well. Although they aren't as rosy as 2004 figures (admittedly, a level not seen in years), shops reported an average of $43,754 in pretax profits in 2006, while 2005

SHOP SALES PROFILE

pretax profit was reported at $43,099. The median pretax profit (the point at which the same number of shops fell above and below) remained steady at $25,000.

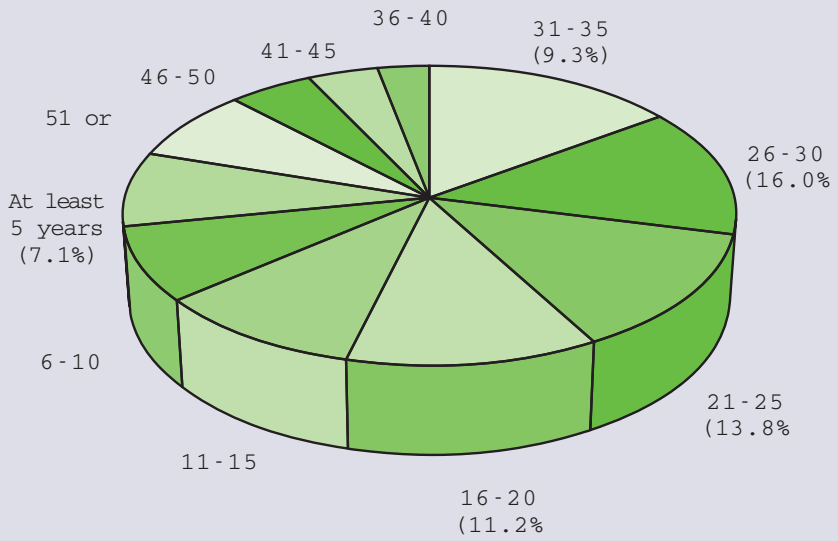
We must point out, however, that of all the questions on the survey forms, only one-third of respondents answered this question. In fact, of the respondents, 12 percent claim $0 or even a loss.

The national average for the number of years a shop has been in business was 26.1 years – a positive aging trend we've watched for the past few years. More than one-third of shop owners (about 34 percent, actually) indicate they have been in business between 11 and 25 years. Collectively, 17 percent of shops have been in business for 10 years or less; and almost half of shops have been in operation for more than 26 years.

When we asked shop owners and managers about the biggest problem they faced in operating and promoting their machine shops, the open ended question provided us a variety of answers. It's not difficult to imagine what many of those responses included: customers who think they know exactly what should be done and who supply their own parts; suppliers who charge too much and provide lousy service and employees who can't or won't work hard enough to do the job right. But we also received a surprising number of "everything's great" responses. To this, we can assume that the shop owner has a great relationship with the people who really matter – including customers, suppliers and shop employees.

This year, wages across the board saw an increase – Shop foremen (where they are employed) typically earn $43,000 annually. Other employees, most likely hourly, saw wage increases as well.

YEARS SHOP HAS BEEN IN BUSINESS



The typical shop has been in business for 26.1 years.

SHOPS EMPLOYING SHOP FOREMAN

	2007	2006	2005	2004
YES	38.2%	38.6%	51.8%	46.7%
NO	61.8%	61.4%	49.2%	53.3%
If "Yes," is foreman a working machinist?			Yes 90%	No 10%

SHOP FOREMAN TYPICAL YEARLY EARNINGS

	2006	2006	2005	2004
EARNINGS	$43,947	$43,000	$42,700	$48,229
PERCENT CHANGE	2.2%	1.0%	-11.5%	26.1%

AVERAGE HOURLY WAGE OF EMPLOYEES

TITLE	2007	2006	2005	2004
EXPERIENCED MACHINE OPERATOR	$18.36	$17.30	$15.80	$16.20
NEWLY HIRED MACHINE OPERATOR	$11.34	$10.80	$10.26	$10.03
COUNTERMAN/SALES	$12.81	$12.70	$12.43	$13.63
CORE DISASSEMBLY PERSON	$10.45	$9.50	$8.57	$9.07

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Machine Shop Market Profile

SHOP DESCRIPTION PROFILE

TOTAL NUMBER OF EMPLOYEES IN COMPANY

NUMBER OF EMPLOYEES	2007	2006	2005	2004
1-5	72.7%	65.9%	76.6%	73.6%
6-10	16.4%	18.8%	10.6%	13.2%
11-15	7.3%	10.6%	8.5%	7.7%
16-20	1.8%	1.2%	0.0%	2.2%
21 OR MORE	1.8%	3.6%	4.3%	3.3%
AVERAGE	4.4	5.9	5.3	5.7
PERCENT CHANGE	-20.3%	11.3%	-7.0%	-20.8%

NUMBER OF MACHINE SHOP EMPLOYEES PER SHOP

MACHINE SHOP EMPLOYEES	2007	2006	2005	2004
1	22.9%	20.7%	25.5%	16.0%
2	37.5%	39.0%	27.7%	19.3%
3	16.7%	15.9%	23.4%	18.5%
4	8.3%	8.5%	8.5%	10.6%
5	2.1%	6.1%	6.4%	3.4%
6-10	12.5%	7.3%	4.3%	6.7%
11 OR MORE	0 %	2.4%	2.1%	2.5%
AVERAGE	2.8	3.1	3.0	3.6
PERCENT CHANGE	-9.6%	3.3%	-16.6%	2.9%

AVERAGE LENGTH OF MACHINE SHOP EMPLOYMENT AT ONE LOCATION

NUMBER OF YEARS	2006	2006	2005	2004
1	2.1%	1.3%	2.2%	2.2%
2	2.1%	3.8%	6.5%	2.2%
3	8.5%	7.6%	2.2%	7.8%
4	10.6%	6.3%	4.3%	3.3%
5	2.1%	1.3%	13.0%	4.4%
6-10	27.7%	29.0%	19.6%	31.1%
11-20	23.4%	29.0%	41.3%	36.7%
21 OR MORE	23.4%	21.5%	13.0%	12.2%
AVERAGE (YEARS)	13.4	13.6	13.0	12.6
PERCENT CHANGE	-1.4%	4.6%	3.2%	9.1%

SHOPS WITH SERVICE BAYS FOR INSTALLATION/REPAIR

PERCENT WHICH HAVE BAYS	2007	2006	2005	2004
YES	23.2%	23.0%	26.7%	40.3%
NO	75.1%	77.0%	71.7%	57.1%
NO ANSWER	1.7%	0.0%	1.7%	2.6%
AVERAGE (FOR THOSE THAT HAVE)		4.7	3.4	5.0

Of course as we all know, the truth is that benefits are often as or more important than cold hard cash. When we asked shop owners what kinds of benefits they provide to their employees, here are their responses (numbers indicate percentage of respondents who provide such a benefit).

- Paid vacation: 75 percent
- Work clothes: 67 percent
- Hand tools: 59 percent
- Training or education: 53 percent
- End of year bonuses: 31 percent
- Hospitalization: 36 percent
- Major medical: 44 percent
- Life insurance: 19 percent
- Pension plan: 21 percent
- Disability insurance: 23 percent
- Profit sharing plan: 12 percent
- Dental care: 28 percent
- Multiple bonuses throughout the year: 25 percent
- Eye care: 11 percent.

Unfortunately, the continuing cost of insurance is likely to make many of these benefits "luxuries" that the average shop owner doesn't feel he can afford. As it is, many of these percentages are significantly lower than last year. About 11 percent of respondents say they offer no benefits of any kind, an increase from the 7 percent who said the same last year.

The total average number of employees per business unit nationally increased 11.3 percent in 2005, primarily in the middle ranges (from 6-20 employees). The average number of machine shop employees climbed slightly (from 3.0 per shop in 2005 to 3.1 per shop in 2006). This 3.3 percent increase shows that there really ARE good employees out there somewhere.

MSMP
Machine Shop Market Profile

SHOP PURCHASING & CUSTOMER PROFILE

The average tenure of today's machine shop employee continues to increase: in 2006, that number is 13.6 years, up from 13 in 2005 and up two full years on average since 2004. Survey respondents say over 80 percent of their employees have been with them for 5 years or more; more than half have been employed at the same location for at least 11 years and almost 22 percent have logged 21 years or more at the same shop.

As we stated at the beginning, niche markets are what keep this industry vibrant. We asked survey respondents what new markets or services they got involved with last year and received the following answers:

- Marine: 8 percent
- Small engine: 10 percent
- Industrial: 8 percent
- High performance: 7 percent
- Diesel auto: 7 percent
- Heavy-Duty diesel: 7 percent
- Restoration: 11 percent

Other markets specified included antique military and diesel high performance.

This survey and its results were performed by Babcox Research, the market research division of Babcox. Babcox Research is uniquely qualified to provide accurate research within the automotive aftermarket.

If you would like additional information about trends in the machine shop market through the years, you may contact Bob Roberts, Babcox Marketing Research manager, at 330-670-1234, ext. 252 (*broberts@babcox.com*) or Doug Kaufman, editor, at 330-670-1234, ext. 262 (*dkaufman@babcox.com*).

AMOUNT SPENT ANNUALLY FOR THE PURCHASE OF INTERNAL ENGINE COMPONENTS

	2007	2006	2005	2004
AVERAGE	$93,104	$87,858	$126,587	$122,949
PERCENT CHANGE	6.0%	-30.6%	3.0%	23.6%

PERCENTAGE OF PARTS PURCHASED FOR REDISTRIBUTION OR RESALE

	2007	2006	2005	2004
AVERAGE	36.7%	47.3%	46.5%	46.0%
PERCENT CHANGE	-22.4%	1.7%	1.1%	1.8%

ENGINE COMPONENTS PURCHASED FROM ONE SUPPLIER OR MULTIPLE SUPPLIERS

	2007	2006	2005	2004
ONE SUPPLIER	28.3%	24.6%	20.3%	31.6%
MULTIPLE SUPPLIERS	71.7%	75.4%	79.7%	68.4%

ENGINE COMPONENTS PURCHASED IN BULK OR CUSTOM-ASSEMBLED KITS

	2007	2006	2005	2004
SEPARATELY OR IN BULK	62.8%	57.9%	57.7%	58.0%
CUSTOM-ASSEMBLED KITS	37.2%	42.1%	42.3%	42.0%

SALES OF ENGINE KITS TO DIY/PRO INSTALLERS

PERCENT WHOSE SALES TO:	DIY	PROFESSIONALS
INCREASED	14.5%	9.6%
REMAINED THE SAME	72.7%	65.4%
DECREASED	12.7%	25.0%
AVERAGE INCREASE %*	10.6%	13.2%
AVERAGE DECREASE %*	21.6%	23.0%

PERCENTAGE OF REBUILT ENGINE SALES TO THE FOLLOWING

	2007	2006	2005	2004
DO-IT-YOURSELF CUSTOMERS	45.8%	45.1%	53.6%	45.7%
SERVICE GARAGE/INSTALLER	27.4%	28.2%	19.4%	26.2%
JOBBERS	7.2%	4.6%	10.0%	7.7%
AUTOMOTIVE DEALERS	4.3%	2.7%	2.6%	2.2%
HEAVY DUTY FLEETS	4.1%	6.1%	1.8%	2.5%
AUTOMOTIVE FLEETS	3.1%	1.4%	1.1%	2.3%
WAREHOUSE DISTRIBUTORS	0.5%	0.0%	0.4%	0.5%
GOVERNMENT FLEETS	0.8%	0.9%	1.8%	1.7%
TRUCK DEALERS	10.0%	0.5%	1.4%	0.7%
MASS MERCHANDISERS/RETAILERS		0.1%	0.1%	0.2%