



*High performance
demonstrated*

TZ125 Makes A Victorious Debut!

Seven machines of the Yamaha TZ125 model which was unveiled in Japan on July 20, made a sensational debut at the All Japan Championship Road Race held at Sugo on July 22. Two of them monopolized 1st and 2nd places in the International category A race, setting the fastest lap time.

YAMAHA
● **30A**

A widened range of use for both work and pleasure!
(See page 11 for more details)

New Models

YAMAHA
● **MA50**

A couple of all-new automatic transmission models have been introduced on the market.
(See page 7 for more details)

YAMAHA
● **PassolaSA50**

(See page 10 for more details)



Around the World

INFORMATION

YAMAHA Motor Canada opens its new head office



Tape-cut by Mrs. Stephanson, Education Minister of the Ontario State. To her left, Mr. Abe, President of Yamaha Motor Canada, and Mr. Koike, President of Yamaha Motor Co.

From Canada: In Canada, this beautiful country of forests and lakes, the new head office building of YAMAHA Motor Canada Ltd. (hereafter referred to as YMCA), which has been under construction in Willowdale, North York City, Toronto, the capital of the Ontario State, was recently completed. The grand opening ceremony and a reception party were held on July 5 with an attendance of about 220 distinguished guests, among whom were Mrs. Stephanson, Education Minister of the Ontario State, Mr. Suma, Japanese Ambassador to Canada, Mr. Persley, Controller of Toronto and North York City and Mr. Walt Heeley representing all Yamaha dealers. From the YAMAHA side, those attending were Mr. and Mrs. Hisao Koike, President of Yamaha Motor Co., Mr. Seisuke Ueshima, President of Yamaha Motor Corporation, USA, Mr. Tsutomu Watanabe, former President of YMCA and now General Manager of Yamaha Motor Co. and Mr. Kikuo Kuratomo, also General Manager of Yamaha Motor Co.. In June, 1973,

YMCA was established in Vancouver in the State of British Columbia as a subsidiary to Yamaha Motor Co.. In September, 1975, its head office was moved to Toronto with an aim to expand the eastern market which includes a greater population and enjoys more vigorous economic activities. Since then, YMCA has grown successfully to the point of opening the above new headquarters. The new building is situated along Highway 404, and occupies a total area of 7.8 acres. Under the leadership of the newly assigned President, Mr. Keisuke Abe, more than 100 personnel are aiming to make a great leap forward towards the 1980's. In the first place, they will try to establish close relations with local communities and to contribute for the benefit of local industries and people's life by supplying quality products. The market share of YAMAHA products, particularly that of motorcycles and snowmobiles, is steadily increasing year by year.

New Harapan Headquarters

From Indonesia: P.T. Harapan Motor, sole distributor and assembler of Yamaha motorcycles in Indonesia, has recently moved to new headquarters located at Jalan Hayam Wuruk 28, Jakarta. As reported already, YAMAHA has become the No. 1 motorcycle brand in Indonesia and the market is still growing. As a big and modern corporation Harapan Motor needed large and spacious offices to accommodate all departments which were scattered around Jalan Gunung Sahari and Pulo Gadung, in order to develop all their business activities in a more efficient manner.

The building was constructed by local staff of P.T. Arta Buana Sakti Real Estate, Harapan's subsidiary company, assisted by foreign consultants.



Very functional design

With a long and narrow site in mind, the building is divided into two masses with a large hall in the center. The front part of the building has 4 floors while the back part consists of 6 floors including the basement. This is the first building with basement parking facilities ever constructed in Jalan Hayam Wuruk, thus it has made a new contribution to the solution of parking problems in this region. The use of columns in the design is minimized for extra work efficiency and aesthetic reasons. All of

Harapan Motor's departments with their 315 personnel are housed in this building. All building facilities, such as electricity, air conditioning, fire protection, water supply, telephone, etc. are functionally arranged. Also, because of narrow frontage of the building and the busy traffic of Jalan Hayam Wuruk a safe solution to the in-and-out traffic of the building, was necessary, especially at the entry passage of the garage in the basement. Accordingly, the building is provided with a traffic light, for visitors coming in and those going out since the entry to the garage is meant for car access only.

MOTORCYCLE

AD & PR tactics for the eighties begin

From Iwata: High performance and top quality are inherent in all Yamaha products, such as motorcycles, outboard motors, portable generators, multi-purpose engines, water pumps, snowmobiles, golf cars, karts, diesel engines, motorboats, sailboats, utility boats, fishing boats, etc. All work divisions, such as production, marketing, service and public relations, are joining efforts to make



another leap forward during the eighties. Market needs differ from nation to nation and the staff of the AD & PR Division are making all efforts to grasp the specific needs of each national market as much as possible so that every sales promotion plan will be a success. New AD & PR tactics are already being set, based on a great store of market research data. Introduced here is a scene of commercial film making in progress at the Yamaha Course. A helicopter is used to add another dimension. Wait until you see the results!

The most successful way of doing business

From Thailand: As reported already, Kenny Roberts won the 500cc road racing world championship title last year while Heikki Mikkola dominated the 500cc motocross world championship. In commemoration of both Yamaha champions' brilliant success, Siam Yamaha in close co-operation with



Catalog of RX100 and DT100X limited models features both champions' brilliant race success.

Yamaha Motor launched a large-scale sales campaign of the specially prepared popular street model RX100 and the off-road model DT100X. The campaign was designated "Yamaha No.1 Limited Sale" and 6,000 machines of both models were placed on the market beginning March 1979. Public response to this campaign was tremendous and all machines were sold out. Yamaha's brilliant sport achievements were coupled with actual sales promotion in this most successful manner. Both basic models themselves are the best sellers in Thailand and the sales of these models are also showing another increase thanks to the success of the above "Yamaha Limited No.1 Sale". Yamaha has already become the No.1 brand in this nation. In designing these special models the technical staff adopted both champions' advice, especially Mikkola who was enthusiastic enough to test-ride the DT100X Limited. Both limited models have such an attractive outlook with eye-pleasing ornaments that owners can take pride in riding them.

First production racer test

TZ125 is firsthand ridden by Japanese journalists



His turn! Journalists are lucky enough to test-ride this fantastic model firsthand.

From Iwata: Yamaha's new production racer TZ125 is designed and built for the large number of lightweight enthusiasts in the world. On July 5, 8 Japanese motorcycle journalists had a chance to ride this fantastic racer model firsthand at the Yamaha Course at Fukuroi prior to its debut on the market. This was the first event of its kind ever organized in Japan. Four machines were prepared by Yamaha Motor and Masashi Ezaki, one of the top Japanese riders, led a group of journalist riders. Each rider completed a couple of laps—quite timidly during the first lap and rather comfortably during the last lap. The whole circuit echoed with dynamic exhaust

sound. Prepared by Yamaha expert mechanics with special care, all machines performed perfectly and enabled each rider to enjoy this test to his heart's content and in his own way. The test ended as a great success and each journal will devote a great deal of space to reporting the results of it, which will also appear on the forthcoming issue of our "Yamaha News".

GENERATORS

ET500 is popular among pleasure seekers



Yamaha portable generators at dealer's shopfront

From Japan: Yamaha 2-stroke and 4-stroke portable generators have a widening range of applications in Japan. It is a notable tendency recently that these products are gaining popularity among an increasing number of young pleasure seekers. For example, campers prefer to use the new 2-stroke compact ET500 as the best available power source for camp site lighting. Designed and constructed with improved operation economy and extra handling ease in mind, the ET500 features such technical niceties as low noise level, large-sized fuel tank, troublefree C.D.I. system, etc. Japanese Yamaha dealers will put greater efforts into expanding a new pleasure market for this model.

MARINE

An immense response to Yamaha's "Service Contest"

From Iwata: Yamaha's worldwide Service Contest which kicked off in June and will last until May '80, is now enjoying an immense worldwide response. As already reported in our No. 6 issue, 80 importers of Yamaha outboard motors (one per nation) were invited to take part in this contest and 72 of them submitted their first reports to

Yamaha by the deadline of June 25. That is:

	No. invited	No. participated
Southeast Asia and Oceania	15	15
Middle East and West Asia	10	9
Africa and Iberia	25	21
Latin America	30	27
	80	72

All these reports are being checked by Yamaha for preliminary evaluation points on each item according to the specified criteria. Each participant has been awarded a set of complimentary gifts (four binders of parts lists and one apron). The future developments in this contest will appear on forthcoming issues of Yamaha News from time to time.

GOLF CAR

YAMAHA starts selling Battery Golf Car

From the United States: The golf car market in the United States is picking up with total sales reaching 70,000 to 80,000 annually. YAMAHA Golf Car G1-A, earlier introduced on the market as a quiet, yet powerful and easy-to-manuever golf car with a two stroke engine, has so far been widely accepted in the U.S.. In response to growing market needs, YAMAHA has recently developed a new type of golf car using battery/motor as its energy source. This newly introduced model is called the YAMAHA Golf Car G1-E and



The newly developed battery/motor model YAMAHA Golf Car G1-E

its overall style was taken from the popular G1-A. Under the seat lies a space for six 190AH 6V batteries in line, and it runs with a motor of 36V70A/2.0KW(2.7HP), 0,75Kg-m/2600 rpm. In designing this model, specific consideration was given to electrical economy. Accordingly, when used at a rate of one round per day and if batteries are properly maintained, the car will be able to run for two years without changing batteries. Driven by this type of motor, the model presents no problems of running noise and golfers can enjoy quiet and lively driving with ample torque. Of all the golf cars available on the market, battery/motor models are said to occupy nearly 70% of the total demand. YAMAHA's new golf car G1-E, with the nickname "Dream

Car", will surely make a good partner to a large number of golfers in the years to come along with the G1-A.

Yamaha golf car plays an active role in a benefit golf event



From Hawaii: A Yamaha golf car G1-A played a very active role in a benefit golf event held recently in Hawaii. The event was attempted by Mr. Dick Sieradzki, well known local amateur golfer, in order to provide financial assistance for Retired Master Chief Petty Officer, Bruce "Hoot" Gibson, well known to golfers, businessmen and just-plain-folks in Hawaii. In late February, "Hoot" was involved in a serious auto accident and his neck was broken in two places. He is now paralyzed from the neck down and prognosis indicates little or no recovery. Although a portion of direct costs is presently covered by insurance, special medical treatment is very expensive. Sieradzki played more than 10 rounds of golf per day for seven days—a total of 1,200 holes! YAMAHA golf car made great contributions to the smooth completion of this hard schedule and the event ended as a big success. Miss Sieradzki who attended the event referred to the excellent features of this model as follows:

- * Outstanding fuel economy (17 rounds were covered by 1/2 full tank)
- * Accelerator pedal's quick, sure response
- * Dependable brakes
- * Good suspension with less vibration for extra driving comfort
- * Safe driving with reverse buzzer
- * Lower engine noise
- * Smooth starting
- * Ample space for golf bags
- * Low maintenance cost

SERVICE

Improved after-sale service



From Brazil: Brazilian Yamaha dealers affiliated with Yamaha Motor do Brazil Ltda. are directing specific efforts toward strengthening their after-sale service system as a core of their sales promotion program. These efforts are steadily taking shape. The picture shows the new workshop of S. Monteiro Ltda. recently completed at Manaus. The aim in building the workshop was to improve the after-sale service system in all phases, such as facilities and equipment, service staff and work capacity, and parts stock control. Installed here are an air compressor intended for a wide range of applications, bike lift, parts cleaner, vehicle washer, etc. The workshop is also equipped with a water tank for outboard motor testing. Such an improved after-sale service set-up provides better service for Brazilian users, which will enhance the reputation of the Yamaha brand, thus benefiting the sales of Yamaha products.

Favorably received technical seminar



Special tools and slides are used in a technical lecture.



They have mastered how to repair or service 2-stroke and 4-stroke machines.

From Venezuela: Venemotos, Yamaha importer in Venezuela, is promoting a motorcycle technical seminar as part of the after-sale service improvement program. Introduced here are the scenes of a 6-day seminar (36 hours) which was recently given for franchised dealers in the western part of the country and workshop mechanics. 14 participants were given a lecture on technical basics and learned how to use special tools for disassembling and reassembling an engine and crankshaft, and how to take precision measurements by using various testers. The contents of the curriculum were so extensive and substantial that all of the participants were able to improve their level of technical knowledge and skill on motorcycle mechanics. The INCE (Technical Training Center) offered a well-equipped room for both lectures and practice.

Around the World

PARTS

Use genuine parts!



From Iwata: Along with the increased market share of Yamaha products, there has grown a problem of imitation service parts. In order to maintain the excellent quality and performance inherent in Yamaha products and thereby ensure operation safety, Yamaha has decided to launch a "Use genuine parts" campaign aimed at both dealers and users. The photograph shows a gorgeous full B size multi-color poster made for this purpose and intended for world-wide use. Some will carry a special mark designed for exclusive use in those nations where the imitation parts problem is particularly serious. In addition, Yamaha considers it equally important to establish an efficient supply system in order to cope with the growing demand for genuine parts and so that the quality of the parts business can be improved as a whole.

Welcome to Yamaha

KELUARGA BESAR YAMAHA



Mr. Herman Saleh

General Manager, Marketing Div.
P.T. Harapan Motor Sakti Industry Co.

"Right now, in Indonesia, we are promoting an extensive sales campaign using the catchphrase "KELUARGA BESAR YAMAHA (Big Family Yamaha)". We are trying to expand the exclusive merits of mopeds and motorcycles to as many people as possible." These were the first words that came out of Mr. Herman Saleh who is chiefly in charge of marketing in the enormous Indonesian market. He visited Japan early in July to attend the Sales Conference held with the staff-in-charge of YAMAHA. Mr. Saleh is a soft spoken gentleman who naturally attracts people around him with his warm and humane personali-

ty. But when it comes to business, he starts talking with full confidence as a front-line salesman covering all of Indonesia. He has eight years of career experiences gained through his affiliation with Harapan Motor. With respect to the future prospect of the Indonesian market, he comments as follows: "In our country, motorcycles including 50cc models have spread out to such an extent that they are almost an inseparable part of people's life. The success of our future business, therefore, will depend on whether we will be able to win people's confidence in our products or not." He further emphasized, "In order to expand our

market, it is indispensable that we set a proper sales target as well as guaranteeing continuous after-sale services." In Indonesia, there has been a steadily growing demand for mopeds for family use, while press-framed motorcycles are widely used for business purposes. In local areas in particular, these bikes have established a firm position as an essential means of daily transportation. On top of that, a conspicuous trend of late years is that the pipe-framed sports-type motorcycles have been showing an immense popularity among young people. YAMAHA Motocross School has also been introduced already, bearing good results. In recent years, more than fifty events have been organized by our dealers annually. These achievements all reflect their constant efforts to penetrate the market with our leading products. Mr. Saleh concluded, "Through these events, I would like our dealers to maintain close communications with sport enthusiasts and to establish a system which enables a thorough follow-up of after-sale services including supplementary repair parts. From now on, we should not sell our products only on the fame of YAMAHA but think much more of good after-sale service. This will eventually enable us to insure safety for the customers, which is the most important task for us all. At present, we at Harapan Motor Co. are exerting our utmost efforts towards this goal." "Big Family YAMAHA" thus represents a great determination of all the people concerned with the Harapan Motor Co., including not only the dealers but their customers as well. Anyone in Indonesia is always WELCOME to join our Big Family!

MOTOR SPORTS

A will of Iron

Mikkola overcomes an injury handicap

Reigning 500 motocross world champion Heikki Mikkola is nicknamed "Flying Finn" or "Finnish Ironman" for his superb riding. This season, however, he has fought a bitter fight because of an injury on his right knee. The problems began for him before the world championship season got under way. At a pre-season international 500cc event held in Belgium on March 18, bad luck hit him at a right-hand curve while leading the runner-up by about 10 seconds. "I was going too slow", he recalled, "I came to a corner at about five kilometers an hour. I put my foot down in the mud and it twisted round. I heard a crack and fell with the bike on top of me". He broke a bone in his leg as well as damaging a ligament. After first aid treatment at the track, he was rushed to the

hospital and underwent an operation.



Mr. Y. Tsuyama is talking of Mikkola's will of iron.

The doctor said that Mikkola would be out of action for three months at least. But, much to our surprise, he bravely rode in the Austrian GP, the opening round of the '79 series held on April 22 about 5 weeks after his accident. The doctor travelled to Sittendorf, specially to attend to Mikkola. He had to quit this round after only six laps because of extremely weakened muscles. His courage and tenacity were displayed when he blasted through the mud to third overall in the French GP, the second round. His spectacular riding was again seen in the Swedish GP, the third round. He dominated the Italian round, the fourth round held on May 27. This showed that he was regaining his top form. America and Canada, however, proved him wrong. The trip across the Atlantic did him no

good at all. Especially in Canada, he lost control and flew over the handlebars flying through the air for about 50 feet, causing muscle damage inside the ribcage. "Mikkola has made every possible effort to strengthen his physical condition by means of swimming, running, etc.", says Mr. Y. Tsuyama, a Yamaha engineer who was with Mikkola throughout the first half of the series. The word "if" is not allowed in the competition world. But neither we nor any sports fans can deny that Mikkola would have clinched the title for the third successive year, but for an injury. Despite such a serious handicap, Mikkola scored 4 wins, 2 seconds and 4 thirds in the 10 rounds he contested. Mikkola, Yamaha's sole title contender, did it well!

Contributions wanted

We hope that the redesigned make-up of "Yamaha News" has been favorably received and that it will now better serve your purposes. It is emphasized again that we are always

looking forward to your co-operation. Every sort of news or information concerning Yamaha will do a great deal to help us further brush up "Yamaha News":

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*This issue also contains 16 pages thanks to many more contributions from various parts of the world.

World-wide sports news

World Championship Road Racing

Kenny Roberts (Yamaha YZR500) placed 4th in the Swedish GP, the 9th round of the series organized at Karlskoga on July 22, adding another vital 8 points to his 500cc championship tally. The Finnish GP, the 10 round of the series, took place at Imatra on July 29. Kenny finished 6th in this race and gained 5 championship points. V. Ferrari

"King" Kenny retains the lead

500cc class

(Suzuki), Kenny's archrival, scored no points in the above two championship rounds. Kenny is now leading Ferrari by 7 points, with two more rounds yet to contest — Aug. 12 British GP and Sept. 2 French GP. There are high hopes for his clinching the crown for the second consecutive year!



RESULTS

'79 Road Racing World Championship Grand Prix

Round 7 — Holland — June 23

500cc	
1. V. Ferrari	Suzuki
2. B. Shaene	Suzuki
3. W. Hartog	Suzuki
4. B. v. Dulmen	Suzuki
5. P. Coulon	Suzuki
6. F. Unchini	Suzuki

350cc	
1. G. Hansford	Kawasaki
2. P. Fernandez	Yamaha
3. W. Villa	Yamaha
4. A. Mang	Kawasaki
5. M. Fruttschi	Yamaha
6. G. McGregor	Yamaha

250cc	
1. G. Rossi	Morbidelli
2. G. Hansford	Kawasaki
3. K. Ballington	Kawasaki
4. A. Mang	Kawasaki
5. J. F. Balde	Kawasaki
6. P. Fernandez	Yamaha

Round 8 — Belgium — July 1	
500cc	
1. D. Ireland	Suzuki
2. K. Blake	Yamaha
3. G. Lingham	Suzuki
4. G. Reiner	Suzuki
5. H. Devries	Suzuki
6. J. Hage	Suzuki

250cc	
1. E. Stollinger	Kawasaki
2. C. Mortimer	Yamaha
3. M. Sayle	Yamaha
4. F. G. de Nicolans	Yamaha
5. G. McGregor	Yamaha
6. M. Simeon	Yamaha

Round 9 — Sweden — July 22

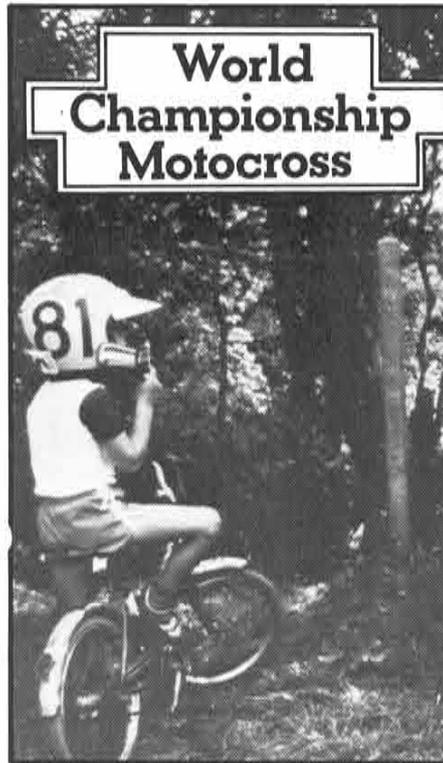
500cc	
1. B. Sheene	Suzuki
2. J. Middleburg	Suzuki
3. B. v. Dulmen	Suzuki
4. K. Roberts	Yamaha
5. S. Parish	Suzuki
6. Randy Mamola	Suzuki

250cc	
1. G. Rossi	Morbidelli
2. G. Hansford	Kawasaki
3. P. Fernandez	Yamaha

4. A. Mang	Kawasaki
5. K. Ballington	Kawasaki
6. C. Estrosi	Kawasaki

Round 10 — Finland — July 29

500cc	
1. B. v. Dulmen	Suzuki
2. R. Mamola	Suzuki
3. B. Sheene	Suzuki
4. J. Middleburg	Suzuki
5. C. Sarron	Yamaha
6. K. Roberts	Yamaha
7. J. Cecotto	Yamaha



World Championship Motocross

Mikkola's second overall victory!

500cc Swiss GP

2. G. Noyce	Honda
3. A. Malherbe	Honda
4. I. van den Broek	Maico
5. J-J Bruno	KTM
6. F. Kobele	Maico

Second race:

1. H. Mikkola	Yamaha
2. A. Malherbe	Honda
3. R. De Coster	Suzuki
4. B. Lackey	Kawasaki
5. G. Noyce	Honda
6. G. Wolsink	Suzuki

Round — 10 — Holland — July 29

First race

1. G. Noyce	Honda
2. G. Wolsink	Suzuki
3. H. Mikkola	Yamaha
4. A. Vromans	Suzuki
5. G. Rond	Suzuki
6. A. Rodal	

Second race

1. G. Wolsink	Suzuki
2. G. Noyce	Honda
3. H. Mikkola	Yamaha
4. A. Malherbe	Honda
5. A. Vromans	Suzuki
6. A. Rodal	

Heikki Mikkola (Yamaha) who had celebrated his 34th birthday on July 6, scored his second overall win in the Swiss GP, the 9th round of the series at Payerne 60 miles from Geneva on July 8. Full thirty points from two first places hoisted him from sixth spot back to fourth. In the first race he took the lead on the 8th lap after early leader R. De Coster (Suzuki) retired when his machine's rear wheel bearing broke up. Mikkola beat runner-up G. Noyce (Honda) by 17 seconds in finishing first.

He snatched the lead from Belgian rider A. Malherbe (Honda) on the 2nd lap of the 2nd race and stayed out in front to lead the Belgian home by 14 seconds. Mikkola scored two third places in the Dutch GP at Markelo on July 29 and increased his championship points by 20.

RESULTS

500cc World Championship Motocross

Round 7 — West Germany — June 24

First race:

1. J-J Bruno	KTM
2. B. Aberg	Maico
3. R. De Coster	Suzuki
4. H. Schmitz	Maico
5. G. Wolsink	Suzuki
6. G. Noyce	Honda

Second race:

1. A. Malherbe	Honda
2. G. Noyce	Honda
3. G. Wolsink	Suzuki
4. R. De Coster	Suzuki
5. J-J Bruno	KTM
6. B. Aberg	Maico

Round 8 — England — July 1

First race:

1. B. Lackey	Kawasaki
2. G. Noyce	Honda
3. R. De Coster	Suzuki
4. G. Wolsink	Suzuki
5. A. Vromans	Suzuki
6. A. Malherbe	Honda

Second race:

1. G. Noyce	Honda
2. A. Malherbe	Honda
3. R. De Coster	Suzuki
4. B. Lackey	Kawasaki
5. H. Mikkola	Yamaha
6. A. Vromans	Suzuki

Round 9 — Switzerland — July 8

First race:

1. H. Mikkola	Yamaha
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Swiss GP — July 1

Former 125 world champion Gaston Rahier notched his first GP victory for Yamaha when he finished top points scorer in the Swiss GP on July 1. Rahier placed 4th in the first race but won the second race in fine style. In this race Rahier took the lead after three laps when early leader Akira Watanabe (Suzuki) crashed. Championship leader Harry Everts (Suzuki) had finished first in the first race but crashed in the second race while challenging for the lead just after the start.

French GP — July 8

Rahier finished second overall in the French GP, the 9th round of the series held at Suce Sur Erdre on July 8. Le "Petit Gaston" fought his way to third spot behind a couple of Suzuki riders in the first race after starting in 9th position. He took the lead in the second race and held it for several laps but settled for second spot behind Everts. Considering his physical problems sustained at the first round in Austria, he has done remarkably well.

Irish GP — July 15

In the second race of the Irish GP held on July 15, Rahier was a victim of the dense dust which almost caused the GP to be abandoned. Races were delayed for one and a half hours after protests were lodged by the riders, who demanded more water on the track. Rahier was forced to fight his way through the dense dust but battled on to finish 3rd behind Everts and Autio in the second race after notching a third place on a steady ride in the first race. His superb ride kept a crowd of 5,000 spectators thrilled.

World-wide sports news

RESULTS

'79 125cc World Championship Motocross

Round 7 - Yugoslavia - June 24

First race:
 1. A. Watanabe Suzuki
 2. H. Everts Suzuki
 3. M. Autio Suzuki
 4. G. Rahier Yamaha

Second race:
 1. H. Everts Suzuki
 2. A. Watanabe Suzuki
 3. G. Rahier Yamaha
 4. M. Miele KTM

Round 8 - Switzerland - July 1

First race:
 1. H. Everts Suzuki
 2. A. Watanabe Suzuki
 3. M. Miele KTM
 4. G. Rahier Suzuki

Second race:
 1. G. Rahier Suzuki
 2. M. Miele KTM
 3. R. Greisch Puch
 4. C. Maddil Apprillia

Round 9 - France - July 8

1. H. Everts Suzuki

2. A. Watanabe Suzuki
 3. G. Rahier Yamaha
 4. R. Greisch Puch

Second race:
 1. H. Everts Suzuki
 2. G. Rahier Yamaha
 3. R. Greisch Puch
 4. A. Watanabe Suzuki

Round 10 - Ireland - July 15

First race:
 1. H. Everts Suzuki
 2. A. Watanabe Suzuki
 3. G. Rahier Yamaha
 4. M. Autio Suzuki

Second race:
 1. H. Everts Suzuki
 2. M. Autio Suzuki
 3. G. Rahier Yamaha
 4. P. Granveld Honda

Round 11 - USA - July 22

1. B. Glover Yamaha
 2. M. Barnett Suzuki
 3. G. Rahier Yamaha
 4. D. Cantaloupi Yamaha

Second race:
 1. M. Barnett Suzuki
 2. B. Glover Yamaha
 3. H. Everts Suzuki
 4. B. Meyerscough Yamaha

World Championship Formula 750

Cecotto consolidates the lead — Swiss round —

Venezuelan star Johnny Cecotto (Yamaha) consolidated his F750 world championship lead when he placed second and first in the Swiss round held at Paul Ricard, France on July 15. Another star in this event was S. Asami (Yamaha). He finished third and second in the two legs and boosted his total championship points to 42 only one point behind M. Frutschi (Yamaha). Cecotto led P. Pons (Yamaha), runner-up, by a massive 30 points after the Swiss round.



2. J. Cecotto Yamaha
 3. S. Asami Yamaha
 4. M. Mattikainen Yamaha
 5. J. Cornu Yamaha
 6. A. terras Yamaha

RESULTS

Round 4 - Switzerland - July 15

First race
 1. M. Frutschi Yamaha

Second race:
 1. J. Cecotto Yamaha
 2. S. Asami Yamaha
 3. P. Pons Yamaha
 4. M. Frutschi Yamaha
 5. R. Roche Yamaha
 6. G. Bonera Yamaha

Hannah dominates AMA 250 motocross!



RESULTS

1. K. Howerton Suzuki 2-1
 2. B. Hannah Yamaha 1-2
 3. M. Tripes Honda 3-3
 4. L. Warsick Honda 4-5
 5. B. Staychur KTM 7-4

Championship positions

1. B. Hannah Yamaha 454 pts.
 2. K. Howerton Suzuki 408 pts.
 3. M. Tripes Honda 315 pts.
 4. J. Weinert Kawasaki 253 pts.
 5. M. Greggson Yamaha 226 pts.

Yamaha's superstar Bob "Hurricane" Hannah won the AMA national 250cc motocross championship title for the second consecutive year when he placed first and second in the 10th round (final) of the series organized in Pennsylvania on July 8.

In the first race Hannah forged ahead during lap 3, and from then on he continued to widen the lead lap by lap.

In the second race Hannah finished second after a long, fierce battle with K. Howerton, his nearest title rival (Suzuki).

Hannah gained 454 championship points from the 10 rounds he contested while the Suzuki ace collected 408 points.

He clinched the AMA 250 title for the second consecutive year in addition to his third successive supercross title and is aiming at the Trans AMA 500 title, in order to complete his triple motocross victory in the United States again.

round rider, Gall also competed in selected road races, including the Castrol Six Hour Race where he rode a Yamaha XS750.

Gall vs. G. Smythe (Ken George Yamaha)

The 1979 Mr. Motocross Series saw Gall in the role of defending titleholder. After an indecisive result in the opening round in Melbourne where he finished fifth, Gall burst to the fore at Round Two.

Mastering the dusty conditions, he won three of the four races, to elevate himself to third spot in the pointscore. Gall picked up a further place after the Third Round in South Australia, and is now just four points behind the leader, Graeme Smythe of Western Australia. Smythe is the current

Australian Champion, and rides Yamahas for the Western Australian distributor, Ken George Pty Ltd. With just four points separating the two Yamaha riders at the top of the table, the Grand Final at Amaroo Park on September 2nd is sure to produce classic racing. They are being closely challenged by former winner Anthony Gunter, who is 9 points behind Gall, in third place. Gall has stated that he is concentrating on winning the Series before announcing his plans for 1980.

RESULTS

Championship positions after the 3rd round

1. G. Smythe (Ken George Yamaha) 124 pts.
 2. S. Gall (McCulloch Yamaha) 120 pts.
 3. A. Gunter Suzuki 111 pts.
 4. P. Granquist Honda 109 pts.
 5. M. Hill Suzuki 65 pts.
 6. S. Rowlands Honda 45 pts.
 7. M. Landman (Milledge Yamaha) 40 pts.

Final round: Sept. 2, Amaroo Park, Sydney

Mr. Motocross Championship

Australia

Stephen Gall (McCulloch Yamaha)

The 1978 Mr Motocross Series marked the turning point in the career of young Sydney rider Stephen Gall. Gall dedicated himself to the pursuit of the title, and after following the series around Australia, he took the win at the final round at Sydney's Amaroo Park. Later that year Gall also won the Australian Dirt Track Championship, riding the same Yamaha YZ400 against special speedway machines. To further lay claims to the title of being Australia's best all-

The Mr. Motocross Championship, six years old this year, is recognised as the most significant title in Australian motocross racing.

The series was conceived after a challenge match between New South Wales and Victoria at Sydney's Amaroo Park, in 1973.

The challenge was settled by four short sprint-type motocross races, contested one after the other — a complete break from the traditional 30 - minute motocross event. This four heat system was adopted for the Mr Motocross series because of its high spectator appeal.



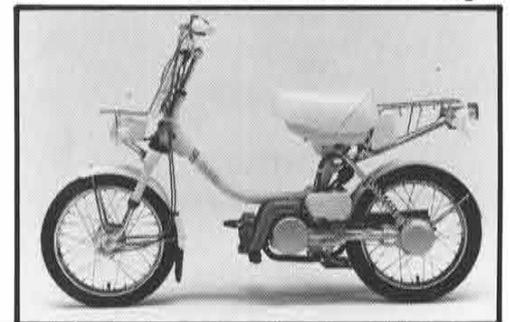
"King" Kenny wins the British GP!

Kenny Roberts (Yamaha YZR500) almost clinched the 500cc crown when he won the British GP held at Silverstone on August 12. He leads V. Ferrari (Suzuki), his nearest title challenger by 14 points and needs only one more point to win the championship.

Next (final) round: French GP, Sept. 2



Modern light moped designed for personal use; appealing even to bike-prejudiced people



The nicely styled Yamaha MA50 50cc looks like a nimble sportcycle. An automatic transmission gives a quick, positive response. A newly designed muffler lowers noise level. Seat height is 695mm allowing easy footing.

New Model



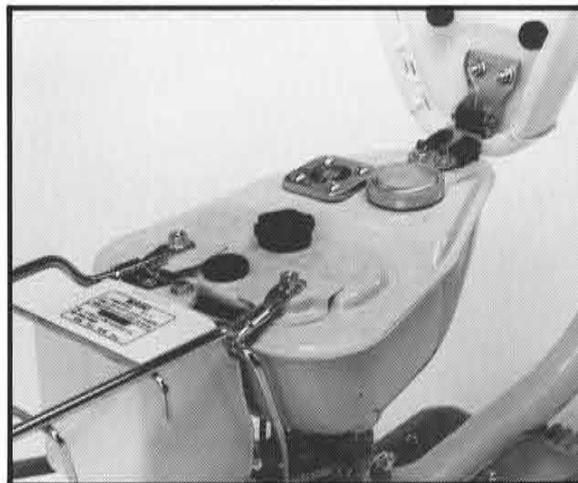
Yamaha MA50 50cc

Ideal bike for beginners

The Yamaha MA 50 is an ideal bike for novice motorcyclists. Designed and constructed with the creation of a new market in mind, the MA50 appeals even to bike-prejudiced people including many women who have been reluctant to ride a bike for the following reasons:

- * Dangerous
- * Hard to handle
- * Too expensive
- * Too complex a mechanism
- * Totally indifferent to riding

Anyone who can ride a bicycle, can handle this model with ease. In addition, this model will serve as the best obtainable second or personal bike for experienced riders or car owners.



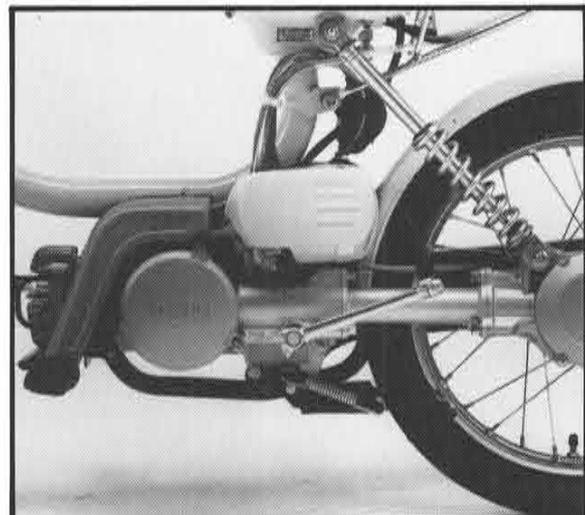
Both fuel tank and oil tank are installed under the seat.

those on a bicycle. A large-sized seat and well-dampered cushions provide superb riding comfort at all times.

Newly designed shaft-drive system

The MA50 is powered by a newly designed 2-stroke reed valve single-cylinder engine installed between footrest guides under the frame. Max. power output reaches 2.3ps at 5,500rpm. The engine starts up with a single kick and the C.D.I. system is virtually maintenance-free. The fuel tank under the seat is fitted with a gauge and holds 2.3 liters. Mileage is about 75km/lit. at 30km/h. As a matter of course, the MA50 features the Autolube separate lubrication system.

The oil tank holding 0.8 liter is also installed under the seat. An oil caution lamp is incorporated into the speedometer. The 6V 2AH battery is positioned on the rear part of the seat and supplies electricity to the flashers and stoplights. One of the most noteworthy technical features is a newly designed shaft-



The engine starts with a single kick. The pointless C.D.I. system is virtually maintenance-free. The shaft-drive system is also maintenance-free.

Nicely compact and slim in style

As you can see, the MA50 is nicely compact and slim in style. Special consideration was given to pipe frame design in front of the seat so positioned that a lady rider is allowed to take a carefree stepthrough posture. The total weight is only 42kg (dry) with this overall slim chassis configuration. This ensures extra handling ease.

Easy-to-handle automatic transmission

Any novice motorcyclist can handle this model with ease if he or she can ride a bicycle. An easy-to-handle automatic transmission enables the rider to execute start and speed control operations. In addition, both hand-operated brakes are similar to

drive system. With this technical nicety, the number of engine-related components is reduced and all are kept clean. The system is virtually maintenance-free. The rear cantilever type suspension with a single oil damper increases riding comfort in combination with the effect of a thick-padded seat and a larger rear tire.



Nice-looking square type headlamp and indicators. A basket on the front carrier is optional equipment for town use.

Specifications

MA50 ENGINE

Type 2-stroke, Reed-valve, Single
 Displacement 49 cc
 Bore x Stroke 40 x 39.2mm
 Compression ratio 6.0 : 1
 Maximum power 2.3ps/5500 rpm
 Maximum torque 2.7ft. -lbs. (0.37kg-m) @3,500 rpm
 Carburetion (1) Mikuni VM12SC
 Ignition C.D.I.
 Starting Primary kick starter
 Lubrication Autolube
 Transmission Automatic with shaft drive

CHASSIS

Overall length 1,545 mm
 Overall width 600 mm
 Overall height 965 mm
 Seat height 695 mm
 Wheelbase 1,050 mm
 Ground clearance 110 mm
 Dry weight 42 kg
 Fuel tank capacity 2.3 liters
 Oil tank capacity 0.8 liters

SUSPENSION

Front Telescopic forks
 Rear Unit swing

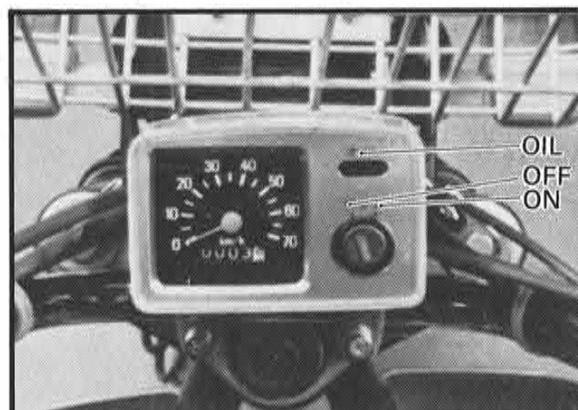
BRAKES

Front Drum
 Rear Drum

TIRES

Front 2.00-14-4PR
 Rear 2.25-14-4PR

*Specifications are subject to change without prior notice.



Speedometer. Ignition key is waterproof. Oil caution lamp is incorporated into the speedometer.

passola





passola

YAMAHA



Elegant styling, lively performance, An all-new trend bike for family use



The well designed Yamaha Passola SA50. Performance is lively. The low-vibration ride is super-comfortable.

Yamaha Passola SA50 50cc

Up-to-date design for the novelty-minded user

The Yamaha Passola SA50 is an all-new trend bike featuring a newly developed step-through, covered type frame for the sake of easy, carefree riding. Its up-to-date design suits the taste of the novelty-minded user in formal dress or in casual wear. The seat is only 715mm high and even a novice rider can place either foot on the ground easily and freely from his or her sitting posture. The stepthrough frame with leg cover enables a lady rider in a skirt to enjoy carefree riding.

Automatic 2-speed transmission

Handling is easy even for a novice rider in the 1-2-3 action as follows:

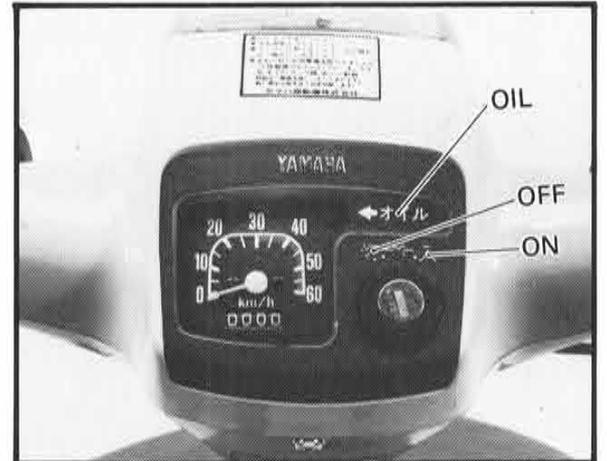


The newly designed stepthrough chassis allows even a novice rider to place either foot on the ground freely whenever necessary. Getting on or off the bike is quite easy. Both carriers are standard equipment.

1. The engine starts with a single kick. A dependable automatic choke-fitted carburetor and powerful C.D.I. system do a great deal for consistent smooth starts.
2. The bike begins to move forward and increases speed gradually when the throttle grip is turned gently. The clutch shifts automatically from low to high as speed is increased. This improves fuel economy. Then in turn the clutch shifts down to low as speed is reduced while taking an uphill. Thus, the machine handles well and dependably even when taking a steep slope.
3. The machine is brought to a sure stop when the throttle grip is closed and both brake levers are gripped. Anyone who can ride a bicycle can handle this bike. **The fuel cock is negative pressure operated.** Fuel supply to the carburetor is automatically stopped when the ignition and 0.9 liter oil tank are positioned under

tion key is turned to "off", even if the cock lever is on "on". As you can see, the Yamaha Passola SA50 features a unique covered style developed through many years of careful market research. The reed valve 2-stroke engine adopts a fan type forced air-cooling system and delivers dependable performance at all times. Max. power output is 2.8ps at 6,000rpm. The rear wheel is driven by an oilbath type chain. The chaincase serves as a swing arm. Dry weight is **only 51kg.** The 2.75-10-4PR tires, pressed steel wheels, thick-padded seat and rear cushion with an oil damper have all greatly increased the riding comfort. A gauge-fitted fuel tank holding 3 liters

comfortable and maintenance is extra-easy. The SA50 is a truly modern personal bike intended for wide family use.



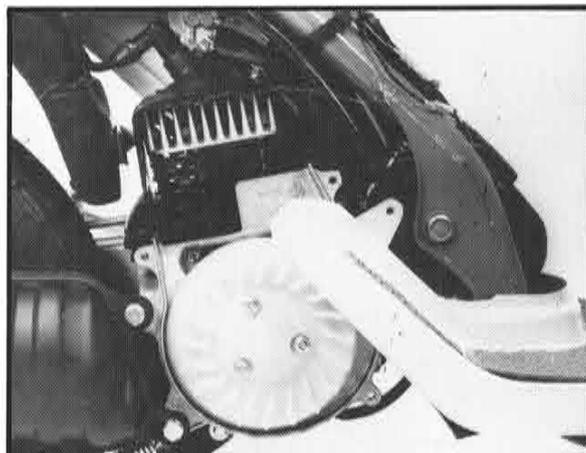
The speedometer incorporates a waterproof ignition switch and oil caution lamp.

Specifications

Passola (SA50)

ENGINE	
Type	2-stroke, single
Displacement	49 cc
Bore x Stroke	40 x 39.7 mm
Compression ratio	6.4 : 1
Maximum power	2.8 ps/6,000 rpm
Maximum torque	0.39 kg-m @4,000 rpm
Ignition	C.D.I.
Starting	Kick
Lubrication	Autolube
Transmission	2-speed, automatic
CHASSIS	
Overall length	1,570 mm
Overall width	615 mm
Overall height	940 mm
Seat height	715 mm
Wheelbase	1,115 mm
Ground clearance	110 mm
Dry weight	51 kg
Fuel tank capacity	3.0 liters
Oil tank capacity	0.9 liter
SUSPENSION	
Front	Telescopic
Rear	Coil spring, oil damper
BRAKES	
Front	Drum
Rear	Drum
TIRES	
Front	2.75-10-4PR
Rear	2.75-10-4PR

*Specifications are subject to change without prior notice.



Forced air-cooling 2-stroke engine. A vibration-proof mounting method transmits no vibration to a rider.

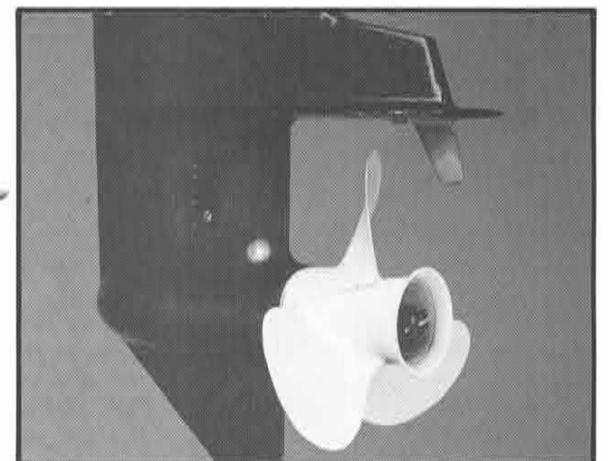
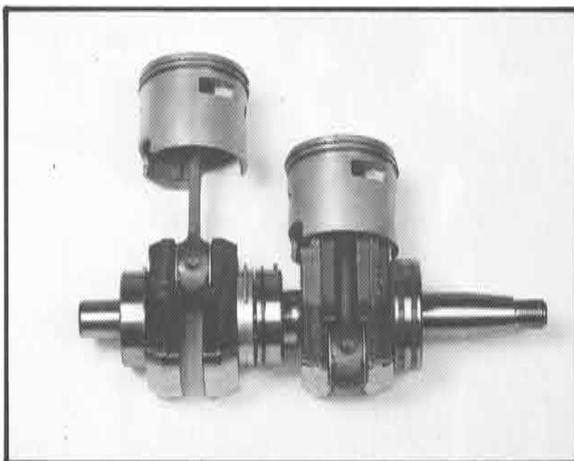
Widened range of use



New Model

SPECIFICATIONS

ENGINE 2-stroke in-line twin, water-cooled
 DISPLACEMENT 496 cc
 MAX. POWER OUTPUT 30 HP/5,500 rpm
 IGNITION SYSTEM C.D.I.
 INTAKE SYSTEM Reed valve
 GEAR SHIFT Forward-Neutral-Reverse
 FUEL TANK CAPACITY 24 Liters
 WEIGHT 54.6 kg (AE), 52.9 kg (AEM), 48.6 kg (AM)



Yamaha outboard motors ranging from 2HP to 85HP are finding a very good market among a great number of fishermen, transporters and marine pleasure-seekers all over the world. Especially, 20HP to 40HP models are always increasing in range of use. These models are accepted as the best obtainable compromise in terms of power and operation economy. The newly marketed 30HP model has further strengthened the 20HP to 40HP range of Yamaha. The new model is available in three different types: AM (hand starter and manual handling), AE (electric starter and remote control) and AEM (electric starter and manual handling).

YAMAHA 30AM/AE/AEM



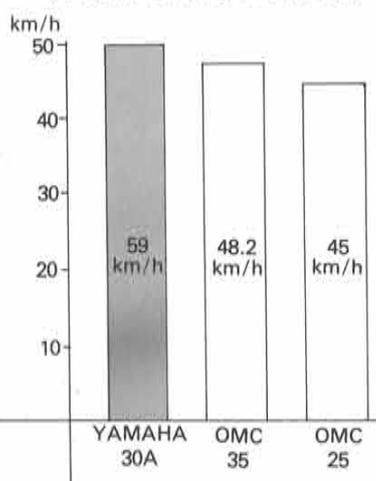
Main technical features

- * Pointless C.D.I. system eliminates mechanical troubles and produces positive ignition sparks at all times.
- * The combination of improved scavenging system and new dual exhaust system raises exhaust efficiency and fuel economy.
- * Specially-designed lower rubber mount holds power-unit vibration to a minimum. Durability and reliability are greatly increased.
- * Tilt can be adjusted in five steps. This allows smooth, troublefree cruising even on shallow or reef waters. Maximum up-tilt is 75 degrees.
- * Top cowling with specially-designed air intake and seals improves the watertight qualities of power-unit greatly.
- * A wide variety of optional parts are available so that extra utility and performance can be obtained

Comparison data

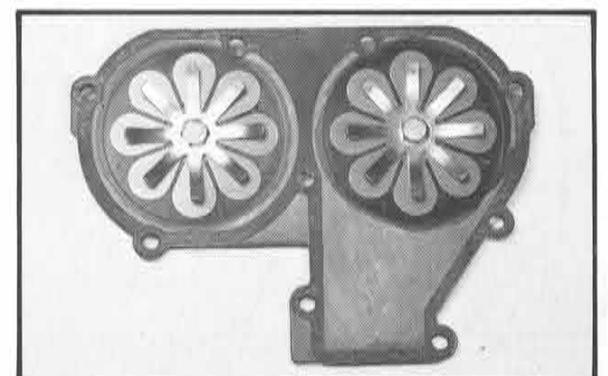
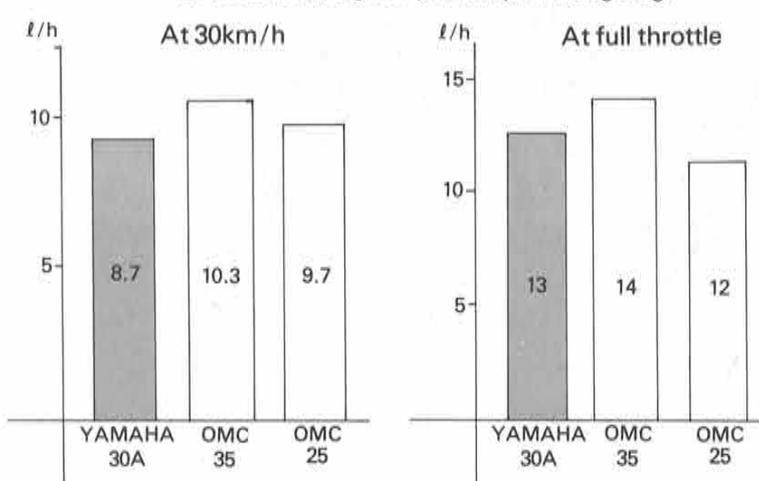
1. Top speed

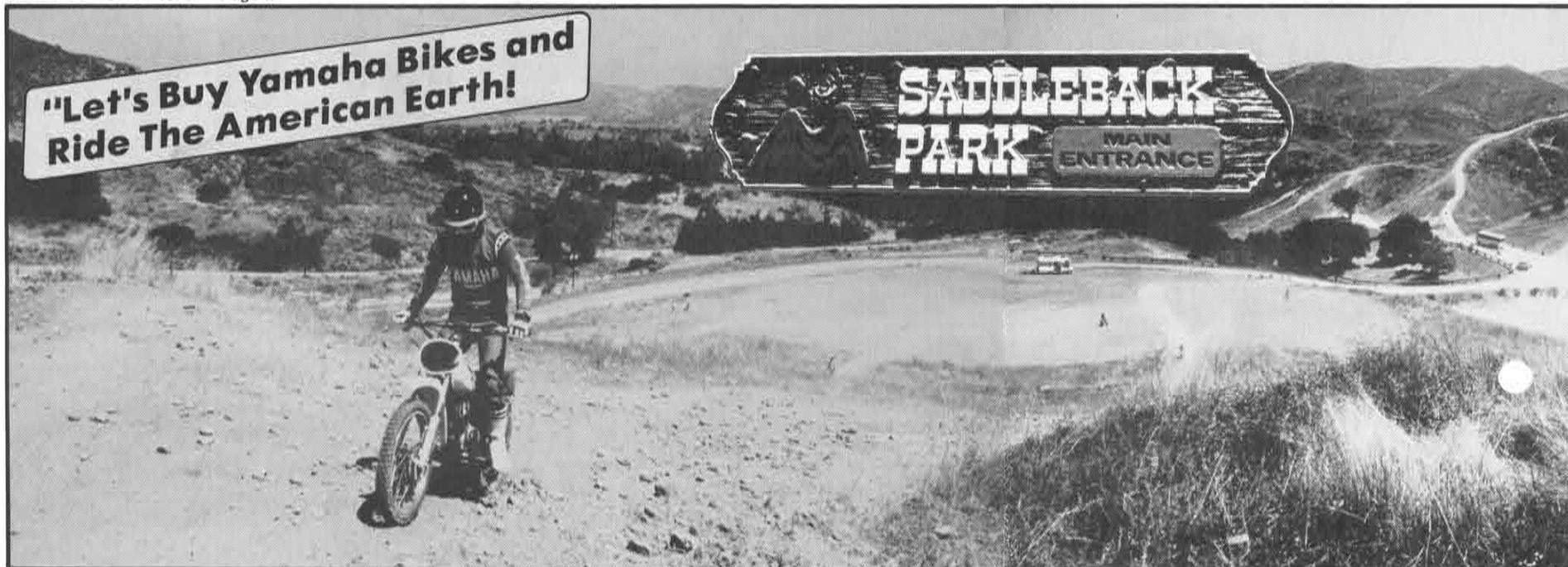
* 14-footer carrying two persons



2. Fuel consumption

* 23-footer carrying two persons plus 200kg cargo





All U.S.A. tour participants are most interested in riding around the vast Saddleback which covers 2,000,000m² in total area. It will take them one week to enjoy riding here to their hearts' content!

Yamaha U.S.A. Tour Creates A Sensation Among Sports Motorcycle Fans Here!

Under the slogan "Let's enjoy motorcycling on the vast earth of America! The Yamaha U.S.A. Tour Sales Campaign, an extensive sales promotion event for large-sized sports motorcycles, was conducted in Japan jointly by Yamaha Motor and main nationwide dealers during the four-month period between February and May this year. This aroused a great sensation among sports motorcycle users here, and brought about excellent sales results.

More than 500 participants in this Yamaha-original project

What this ambitious plan, quite unprecedented in Japan, aimed at was to realize the dream of many of Japan's motorcycle users to enjoy motorcycling on the vast plains of America to their hearts' content and to enable them to be in firsthand contact with the manners and customs of the west coast of the country, which now has a powerful influence on the fashion and life style of Japan's young generation. The participants in the tour were scheduled to visit Los Angeles and a number of other places on the west coast of America for eight days. Those who bought a Yamaha motorcycle with a 250 and upward c.c. motor during the campaign period, would be presented with 100

dollars as pocket money. This had been widely publicized over a period through technical journals on motorcycles. Publicity was also done by posters and other media in the stores of Yamaha dealers. Into this large-scale campaign, the dealers also incorporated special sales promotion activities of their own. Thus the campaign created a large sensation among motorcycle users. Some of them said, "The tour is the very thing that we motorcycle riders want," and others remarked, "This is a really grand undertaking none other than Yamaha could have fathered." More than 500 participants gathered from various parts of Japan. They were divided into eight groups and the first group left Japan for California on June 18 and the last on August 27. Several proprietors of stores went in company with their

Animated conversation with Mark Lawrence, American expert rider. New friendship grows through motorcycles.



customers, and this showed that in Japan most sales agents positively utilized this great project as a part of their after-sale service activities for users. The core of the tour was free riding at Saddleback on the outskirts of Los Angeles, where all the members enjoyed all types of off-road riding, such as hill climbing, trial, trail riding, and motocross. They rode twenty-four MX100s and

MX175s, prepared by Yamaha Motor Corporation, USA, and scorched over the vast plains of America, as they had dreamed, to their hearts' content.

Another thing which won popularity with the participants was field trips to representative Yamaha stores in America. The stores chosen were Premier Yamaha and Yamaha Mission Viejo, and the participants,



Tour members. Freeway drive, visit to Disney Land and so on...everything is wonderful.



They pay a visit to Yamaha Mission Viejo in Calif.

Yamaha Motocross School Gains More Popularity Thailand



Motor sports journals giving much space to reporting this event

The program of the Yamaha Motocross School is developing world-wide in order to meet strong market needs. This program which is aimed at rooting sound motorcycle sport as well as promoting the spread of active yet safe and pleasure riding, is gaining great popularity in many different nations.

Introduced here is a special campaign launched recently in connection with the Yamaha Motocross School in Thailand. Intending to promote the spread of this program as far as possible, the staff of Siam Yamaha conducted a unique multilateral campaign including new model demonstration, on-the-spot sale of parts and accessories, free service checks, outdoor movies, in addition to direct organization of the Yamaha Motocross School. Motor sports journals gave much space to reporting this campaign far and wide. The combined effect of the above activities had a strong impact

on the market, thus benefiting the sales promotion of Siam Yamaha and their franchised dealers. Mr. Pisal Parepatara, Assistant Sales Manager of Siam Yamaha, serves as organization manager of the Yamaha Motocross School in Thailand.

Much more consideration should be given to these points.

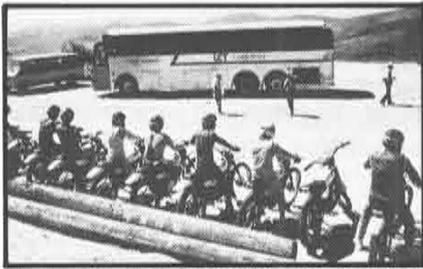
Also, the Yamaha Motocross School should be useful for both participants and spectators. With this in mind, we have recently launched a multilateral campaign in close co-operation with our franchised dealers. This was a big success in advancing the brand image of Yamaha." Mr. Pamuk who is always with Mr. Kazutoshi Iwao, Yamaha's special instructor, and acts as assistant instructor, says - "Participants can take a 2-day course (Saturday and Sunday). Curriculum is arranged so that they can master various fundamentals of off-road riding within this short period of time. Acquired techniques are useful for safe riding on normal roads as well.

The Yamaha Motocross School is winning broad support from all safety-minded people including police authorities."



Mr. Pisal Parepatara

He states his own view of this school as follows: "Three years have already passed since the Yamaha Motocross School started in our nation. We have learned a lot through the promotion of this program. The most important thing is to understand what our customers want and how they want to utilize it.



Machines are provided by Yamaha Motor Corporation, U.S.A. Riding greatly pleases them after a long bus trip.



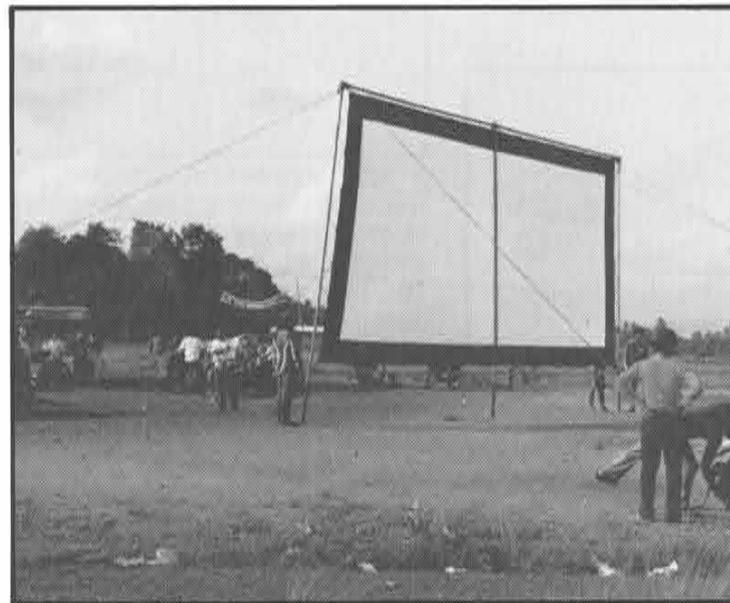
The course of Saddleback is used separately by novice and experienced riders. Everybody must keep a leader in his sight. Otherwise, he might lose his way.

especially dealers, closely observed the American-style stores, which surpass their Japanese counterparts in many ways, such as window decoration, the way of arranging goods inside a store, and the management of after-sale service work. It was impressive that the observers were eager to get helpful hints for improving their own stores in Japan.

Besides these two features, the itinerary included visits to Disneyland, Las Vegas, and Hawaii, and shopping in Los Angeles, San Diego, and Tijuana. Everyone fully enjoyed the large-scaled Yamaha U.S.A. tour of eight days and seven nights.

Sensation created among users; Ties strengthened between customers and dealers

In Japan now the various experiences of the participants in the recent Yamaha tour are creating a sensation among sports motorcycle users. User service activities like this not only improve the image of Yamaha's brand name, but also bring about better relations between Yamaha dealers and their customers and strengthen the ties between them, and thus help keep "good" clientele. In this sense, too, the Yamaha U.S.A. tour was a big success.



Preparations for outdoor movies



PR car announcing the organization of Yamaha Motocross School (Trang)



Yamaha motorcycles on display (Roi-et)



Parade is led by a policeman (Saraburi).



Sale of parts and accessories



Free check service (Surin)

Technical series

Service & Maintenance

You should strive to maintain a positive attitude toward improving your level of repair/service techniques and knowledge so that you can see every customer use his or her Yamaha bike in the best operative condition. This technical series has been designed with this in mind and provides proper coverage of the fundamentals required for every Yamaha serviceman. Gain more through elevating the brand image of Yamaha!

(These pages should be kept long and fully utilized for your better service work.)

Battery

The battery has a function similar to that of man's central nervous system. If its function is not satisfactory, the engine is reluctant to start; headlight is dimmed; indicators, flashers and stoplamps become inoperative, thus affecting badly the operation economy and safety of a machine. Very few are usually conscious of the importance of this equipment, so long as it works well. But, as mentioned above, its function has much to do with the total performance of a machine, and service and maintenance must be conducted with special care.



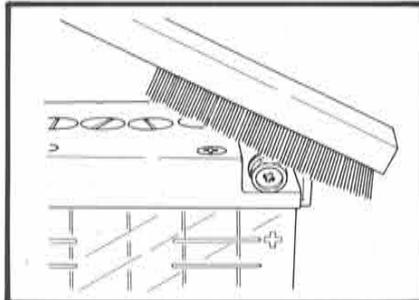
Battery Inspection

Battery inspection is relatively easy. Inspect it for the following points.

1. External appearance
2. Level of the electrolyte
3. Amount of electricity discharged

1. External appearance

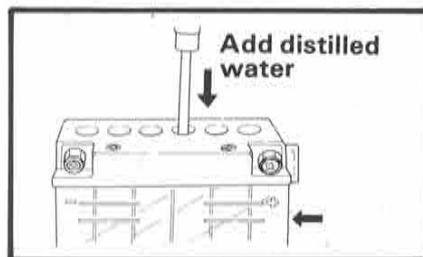
Inspect the battery casing for any cracks, fluid leakage, deposits in the bottom or excessive plate sulfation. A battery with cracks or fluid leakage must be replaced with a new one. A battery with some deposits seen on the bottom of its casing can still be used, unless actual performance is spoiled. But, in case such deposits reach the lower part of the plates, a short circuit is made between the positive and negative plates. In this case the battery must be replaced with a new one. The same can be said of excessive plate sulfation. Use tepid water to wash green deposits away from around the terminal. Use a wire brush or sand paper to remove the crystalline sulfate or dirt. Keep in mind that poor contact is often caused by these alien substances.



Wash the exterior of the battery with tepid water. The terminals should be thoroughly cleaned by use of a wire brush to remove the crystalline sulfate or dirt.

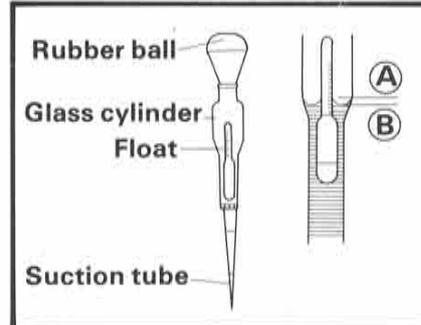
2. Level of the electrolyte

Make sure that the amount of electrolyte is kept at the prescribed level. The level must be about 10 mm higher than the upper end of a plate. The electrolyte will evaporate when exposed to the air or when the temperature rises during charging. If the amount of electrolyte is found insufficient, add distilled water to it until the prescribed level is reached. Care must be taken to prevent the fluid from going over the upper limit of the prescribed level. In case the amount is too much, fluid tends to overflow during charging, thus corroding battery fittings and also disturbing the density of electrolyte.



If the fluid level is lower than specified, distilled water should be added. In case advance charging is required, it is advisable to add water to a fluid level slightly lower than the specified line as the level tends to rise when the battery approaches the state of full charge.

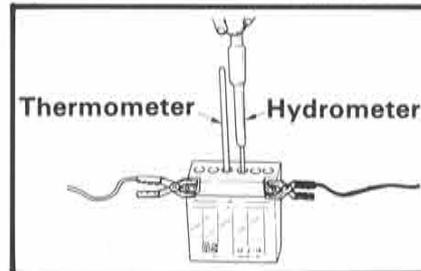
3. Amount of electricity discharged



How to measure the specific gravity of the electrolyte

The simplest method of measuring the specific gravity of the electrolyte is to use a hydrometer. This instrument consists of a rubber ball, glass cylinder and float. It is important to hold it vertical, and care should be taken that the float does not touch the cylinder wall. The amount that the stem protrudes above the electrolyte indicates the specific gravity. Take the reading at point B.

Hydrometer: Item No.90890-03036

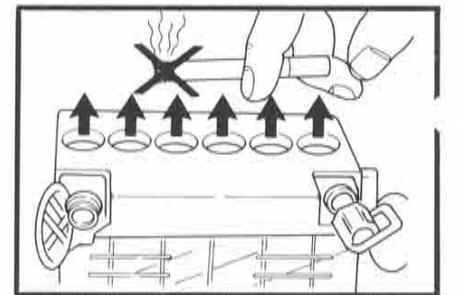


A measurement of the voltage, specific gravity and the temperature of the battery should be made for each cell before and after charging. The filler cap must be kept open during charging and measurement should be made on the cell located in the center at proper intervals of time. In case the battery fluid rises to overflow or its temperature rises above 45°C, the current rate must be reduced to prevent the temperature from rising and the charging time should be prolonged.

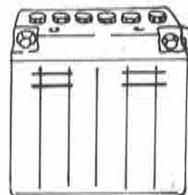
Mere visual inspection can not decide whether the battery is in good working condition or not. Use a hydrometer or battery tester to measure the specific gravity of electrolyte. If it is higher than 1.2 at 20°C., the battery is in good working condition. If it goes lower than 1.2, charging will be required. A battery charger is used for this purpose. The charging current varies in accordance with the capacity of a battery. For example, a 6V2AH battery needs a current of 0.2 amp. while a 12V12AH one, a current of 1.2 amp. The amount of charging must be 1.2 to 1.5 times that of the amount of discharge.

That is:
 Charging time (H) = $\frac{\text{Amount of discharge (AH)}}{\text{Charging current (A)}} \times (1.2 \text{ to } 1.5)$

The quick charging method may be used but should be avoided as much as possible, except in emergency. Otherwise, the life of a battery will be shortened. Keep a filler cap open during charging. Refrain from smoking or causing electric sparks while the battery is charged. There is a danger of explosion because a mixture of oxygen and hydrogen gases is produced during charging.



Avoid smoking while the battery is being charged. There is a danger of explosion because a mixture of oxygen and hydrogen gases is produced during charging. Also choose an open place with good ventilation for charging.



What is the battery?

- A. The battery stores electric energy in the form of chemical energy and supplies electric energy as required. Charging is done to convert electric energy into chemical energy and store it in the battery while discharging takes out chemical energy in the form of electric energy.
- B. The Battery used on motorcycles is called a wet type. Unlike a dry type on a transistor radio, it can be recharged after being discharged.
- C. The battery has numerous separate cells in its case. Each cell,

- made of synthetic resin or ebonite, consists of a number of positive and negative plates, and dilute sulfuric acid for storing electric energy.
- There is a separator between the positive and negative plates.
- D. The specific gravity changes in proportion to the amount of discharge. The state of charge can be determined by measuring the specific gravity with a hydrometer.
- E. Overcharge is like eating too great. In this case the supply of electric current is too much. Overcharge is caused by the faulty function of a voltage regulator. The life

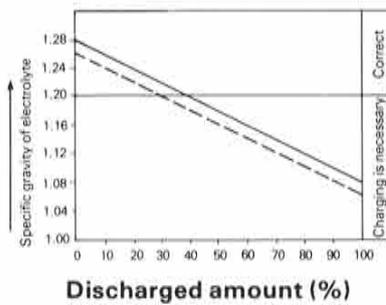
of an overcharged battery will be shortened.

F. On the other hand, over-discharge is similar to the state of being hungry. That is, the amount of discharge exceeds the amount of charge. Overdischarge is caused by riding too often at night or by the use of extra electric accessories on it.

G. The battery becomes in-operative when the temperature falls. For example, when the battery is in full working condition at 25°C (electrolyte temperature), performance will be reduced by 25% at 0°C. An electric starting motor may

not work sufficiently in cold weather.

H. Ignitable gases are produced inside the battery. Remove it from a machine at its ground side first. Fit it to a machine at the other side first. This procedure will prevent the generation of electric sparks. Make sure that a charger is disconnected from the power source before the battery is connected to it for charging. Also, a charger must be disconnected from the power source before disconnecting the battery from it upon completion of charging.

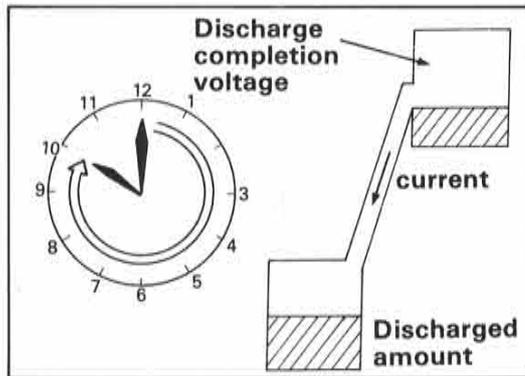


— The case of a battery, whose specific gravity is 1.280 (20°C) in a fully charged condition.
 ---- The case of a battery, whose specific gravity is 1.260 (20°C) in a fully charged condition.

Discharged amount and specific gravity

The figure on the left shows changes in the specific gravity of the electrolyte during the discharge process. The specific gravity changes in proportion to the amount of discharge; that is, the specific gravity shows a linear decrease. Accordingly, the state of charge of a battery can be determined by measuring the specific gravity of the electrolyte.

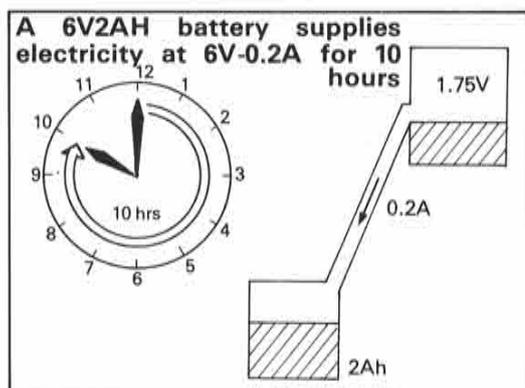
E



B The capacity of a battery

This means the amount of electricity which can be taken out before the discharging terminal voltage falls to the prescribed level on a fully charged battery that is discharged at the specified rate of current for many consecutive hours.

That is:
 Capacity = Discharging current × Charging hours (Ah)



F Discharge rate

This means the rate of the discharging current. This is specified in the number of hours during which a fully charged battery is completely discharged. For example, if a fully charged battery needs 10 hours for complete discharge when it is discharged at the current of 0.2A, the 10-hour discharge rate of this battery is 2Ah.

JIS spec.	Normal voltage (V)	10 hour rate capacity (AH)	Charging current (A)	Electrolyte amount approx. (l)	Specific gravity of electrolyte at end of refilling or charging (20°C)	
					The temperate zone	The tropic zone
6N 2 AH	6	2	0.2	0.1	1.26	1.24
6H 4 AH	6	4	0.4	0.2	1.26	1.24
6N 5.5AH	6	5.5	0.55	0.25	1.26	1.24
6N 6 AH	6	6	0.6	0.25	1.26	1.24
12N 5 AH	12	5	0.5	0.45	1.28	1.24
12N 5.5AH	12	5.5	0.55	0.4	1.28	1.24
12N 7 AH	12	7	0.7	0.5	1.28	1.24
12N 9 AH	12	9	0.9	0.55	1.28	1.24
12N10 AH	12	10	1.0	0.75	1.28	1.24

How to make sure that the battery is fully charged

1. The specific gravity of the electrolyte becomes 1.250 to 1.290 and maintains the same value for more than one hour.
2. The voltage of each cell becomes 2.5 to 2.8 volts and maintains the same value for more than one hour.
3. Gassing becomes active. (bubbles in cells)
4. The amount of charging (charging current × charging time) becomes 1.5 times the nominal capacity of the battery.

If three of the above four conditions are met, the battery is considered to be fully charged.

Q & A Corner

This is a new series. Every kind of question will be answered here. If you have any questions to ask on motorcycle mechanics, service/maintenance, riding technique and any other subjects, please do not hesitate to contact us at the following address:

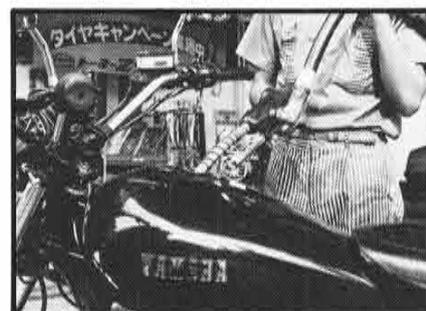
“Yamaha News” Editorial Room
 AD & PR Division
 2500 Shingai, Iwata-shi, Shizuoka-ken (Japan)
 Code No. 438

This series will cover not only motorcycles but also all other products of Yamaha, such as snowmobiles, outboard motors, generators, etc.

Q Outstanding fuel economy is inherent in a bike and the current oil shortage makes us renew our recognition of this unique merit. I wish to know how to prevent even a drop of precious fuel from being wasted.
Mr. Lee Shun Shing, Singapore

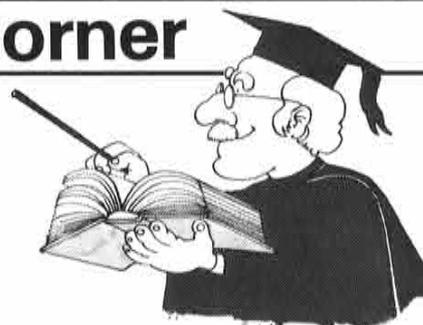
A You have a very good intention. Energy saving is truly a matter for serious public concern. Well, the main causes of fuel waste are itemized as follows:

- (1) **Incorrect carburetor setting**
 This results improper mixing of air and gasoline. Gasoline is wasted when the mixture is too rich.
- (2) **Incorrect ignition timing**



A Yamaha XS750 Special owned by one of the editorial staff covers 20km per liter in spite of heavy traffic in Tokyo.

The effect of explosion is spoiled by incorrect ignition timing. This causes imperfect power delivery, resulting in too wide a throttle opening and more fuel consumption.



- (3) **Inoperative starter carb.**
 The starter carb. has a function to start the engine very smoothly even in cold weather. That is, each Yamaha model has an auxiliary carb. used exclusively for starting the engine, in addition to the conventional carb. for supplying an air/fuel mixture to the engine while cruising. Make sure that it is correctly set before starting the engine.
- (4) **Faulty air cleaner**
 Fuel is wasted when the air cleaner gets clogged. Clean it periodically. Replace it with a new one, if necessary.
- (5) **Imperfect clutch operation**
 When the clutch operation is imperfect (half engaged), cruising speed is not increased despite increased engine rpm. This will lead to wider throttle opening and result in more fuel consumption.
- (6) **Imperfect brake operation**
 Both power and speed are spoiled by imperfect brake operation

(partly engaged even when unnecessary). This causes too wide a throttle opening to be used.

(7) Insufficient air pressure in the tires

This causes poor handling and extra power is needed to make up for it.

(8) Fuel leakage

No explanation is needed.

In addition, fuel waste is caused by useless increase of engine rpm with clutch disengaged; abrupt acceleration or start; improper use of low gear; too heavy a load; use of poor quality gasoline, etc. Also, worn piston rings, pistons or cylinders may cause fuel or oil waste. You should periodically inspect and service your bike and gauge the correct mileage.
 Do you know what it is for your own bike?

$$\text{Mileage} = \frac{\text{Total distance covered}}{\text{Total fuel consumed}}$$

For example, if two liters of fuel are consumed to cover 100km, the mileage is 50km/lit. Compare your bike's mileage to that of another of the same size which has been used under similar conditions for the same period of time. In this case, better mileage means better servicing as well as higher riding skill.

Colour Topics

Commercial filming in progress for the eighties

(continued from page 2)

Brisk stouts are heard through dense morning haze drifting around the Yamaha Course at Fukuroi. Commercial filming is in progress for the eighties and the staff are in full action using even a helicopter.

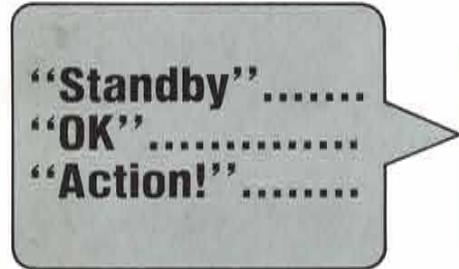
Their efforts will come to life in forthcoming AD & PR materials designed and produced to meet the particular needs of each national market.



What is this bike?!

A new '80 racer! No, don't jump to any hasty conclusions. This is a pocket bike designed and marketed by Sunward International Inc. in Japan. As you see, the bike is an imitation of the GP-winning YZR500. The overall length is 925mm and the total weight is 16Kg! Powered by a 1.6PS 2-stroke 30.5 cc engine and fitted with both 3.00-4 in. tires, the bike can carry even an adult rider. The bikes of

this size (called pokebai in Japan) are rapidly gaining popularity among youngsters, mainly high school students, but including even children at the age of 4 or 5 years old who are interested in circuit racing. This model, finished in Yamaha-designated colours under the consent of Yamaha Motor, was recently introduced on the market. Any shopfront display will be more attractive with this model.



Outdoor advertising

Part 2

Points to remember

Here are some points to remember:

1. To whom do you want to appeal (target); pedestrians, students, car drivers, etc.
2. What is the best distance from the traffic flow. It should not be too close or too far. The size of the advertisement must be considered.
3. Is the angle right? Make sure the angle is appropriate to the location.
4. Is the surrounding area proper? Make sure that there is nothing in the surrounding area which will detract from the effect.
5. Will the surrounding area be proper in the future? Check to make sure that the area will stay as it is, i.e. traffic will not be diverted by new railways or roads or that new buildings will not obstruct or otherwise detract from your sign.
6. Does it meet local laws and regulations? Many areas have specific regulations concerning outdoor signs.

field of vision in a short time, a straight expression with a simple content is important.

4. Railroad, stations, bus terminals, airports, etc.

These places are flooded with a myriad of outdoor billboards, so an appeal expressing a concrete idea

loses its impact, and its effectiveness. Advertisements for the Yamaha brand are ideal for these places. These brand ads should not be placed in just one spot, but many ads of the same pattern should be placed at various spots for the most greatest effectiveness.

Examples

1. Busy streets

A busy street is where a large number of people gather, and therefore a very conspicuous place. Since it gives maximum results as an outdoor advertisement medium, a meaningful and expressive content that will result directly in sales, is demanded. For example, a notice for new product release, or new proposals in life may be ideas.

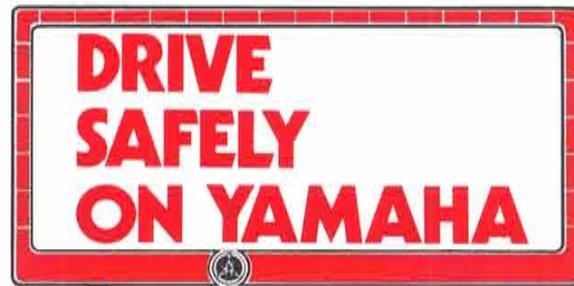
The entrance to a city allows the most frequent chances to catch the eyes of people commuting to and from work and school. Here, the convenience of the bike as a means of transportation should be appealed.

3. Busy highways

An outdoor billboard along a busy highway has a high chance of receiving attention from a person in a passing car. However, because it disappears from the

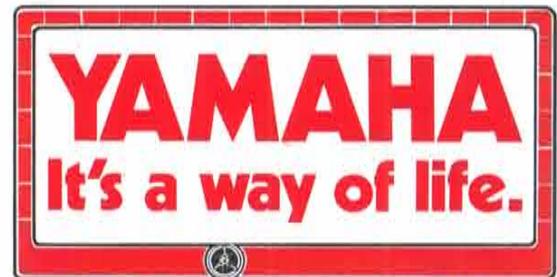
2. The entrance to a city

1. Busy street



3. Busy highways

4. Railroad, stations, bus terminals, airports, etc.



2. The entrance to a city

