

Volvo does not compete. But since so many Volvo owners want to compete in Volvos, it is Volvo's duty to see that good and approved accessories are available.

That is, in very simple terms, the background to why Volvo Competition Service – commonly known as the competition department – exists. Volvo Competition Service is a small department with only 25 employees.

Their tasks are varied. They build and service. They tune engines and develop features for use in competitions.

Not only on cars but also on boats. For a large part of Volvo Competition Service's activity is concerned with preparing boat engines for competition. Their features and equipment are sold via Volvo's retail organizations throughout the world. In Europe,

in the U.S.A., in Africa and in Australia – in most places where they compete with cars, they compete with Volvos. And with equipment from Volvo Competition Service in Gothenburg.

The factory reserves the right to make changes at any time, without notice, in prices, colors, materials, equipment, specifications and models and also to discontinue models.



VOLVO
Competition Service





Competing in a Volvo...

Rally

The Swedes are very skillful rally drivers. That is perhaps because so many of them were 'brought up' on narrow, winding, gravel roads. Rally is undoubtedly the most popular motor sport with a great many national classes and participants. A total of more than 20,000 Swedes actively compete in Rally sport. And they have plenty of competitions to choose from. In 1975 there were about 450 different rallies held in the country. That is to say almost ten events in different places - every weekend. In the same year, of Sweden's eight million inhabitants one million choose to spend long hours in the darkness to catch a glimpse of the various cars and drivers. Not least of those driving Volvos.

Rallycross

One branch of motor sport which has really captivated Europe in the seventies is Rallycross. Naturally Volvo is there in the shape of Per Inge and his turbo-charged 215 h.p. special.

In Rallycross the advantage lies with cars with good acceleration and with the engine over the driving wheels. This has made Per Inge and his car favorites with the crowds: he gets away after the others and has to drive right through the field to win. In 1975 Volvo drivers even got their own national series in Rallycross. In these you can compete with any car made by Volvo. Regardless of model or make. In this series



Volvo 441's from the sixties fight for position with cars from the 121/122 Series, 140's, 1800 sports cars and brand new modern 240's. And because there are so many Volvos, and because they wear so well, it is a cheap way of driving in Rallycross. Kjell-Ake Hellqvist, from Malmö in the south of Sweden, who won the very first competition in the series, entered in a car which cost him \$1,600 to convert from a rally to a rally-

cross-car. In three competitions he won more in prize money than the car originally cost him!

Rallycross is a tough sport enjoyed by the public and it also has a good spectator following.

The cars are lightened by removal of everything superfluous. The bodies are then strengthened and the drivers are protected by a rigid reinforced compartment.



Tuning a Volvo

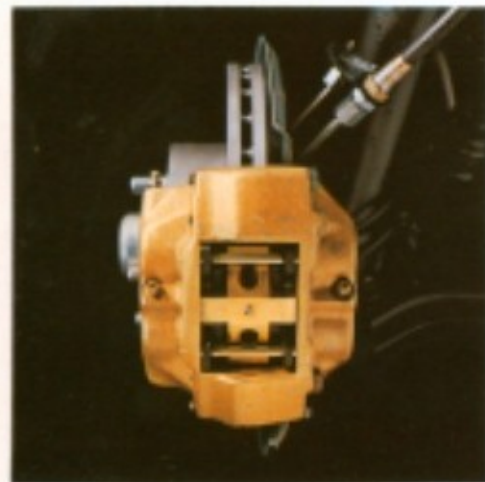
Tuning and trimming a Volvo: it's not just a question of squeezing the maximum possible horsepower out of the engine and then driving.

No! You begin first with the road-holding. With the brakes, the transmission and the interior. Then it's time to start on the engine.



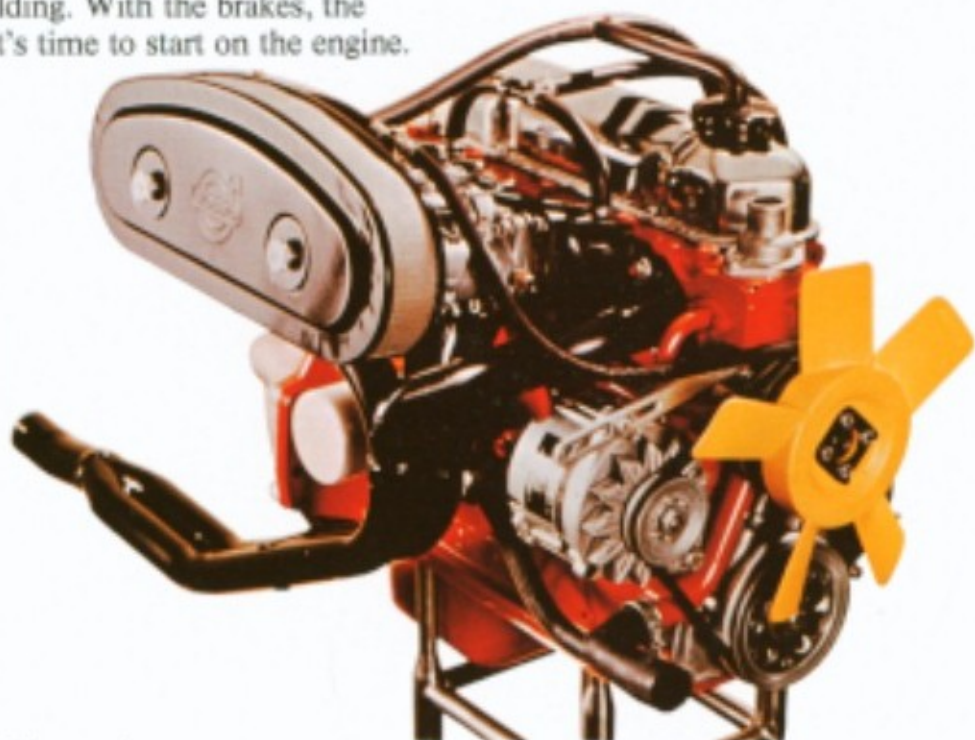
Road-holding

Everyday standards of driving comfort are not what a competition driver needs. He must have springs and shock absorbers which ensure that the wheels really do take a hard grip on the road surface. Despite the fact that the road is often in poor condition and the speed high. The wheel suspensions must be strengthened and stronger stabilizers fitted - front and rear.



The Brakes

The brakes are put under a lot of strain in a competition car. So it is partly a question of distributing the braking power correctly between the front and the rear wheels. Also the brake lining must be dimensioned to withstand the intensive stress competition entails, whether it is in the forest or on the track.



The engine

Most people enjoy working on the engine. And there is quite a lot you can do - irrespective of whether you compete in specials or standards, everything must be in full working order. This especially applies to the standard classes because in this type of competition, a difference in output one way or the other can mean a great deal. In Sweden,

the Volvo 66 and Volvo 343 are ideal for Standard B class in rally driving while the big Volvos, the 142/144 GL, are more suited to standard A, both for track racing and rally. Tuning to high levels involves not only getting more output from the engine, but also ensuring reliability. And then, only the best equipment, tried and tested, is good enough.

Highest permissible engine output in tuned standard cars

Type Volvo	Highest permissible engine output, DIN h.p.	Special conditions
PV 444	76	None
PV 544	100	None
PV 544	110	Disc brakes, front wheels
121/122S	100	None
121/122S	140	Disc brakes, front wheels
121/122S with effect from 1969	150	Special type ¹⁾ of brake pads and linings
142, 144	140	None
142, 144, 145 with effect from 1969	180	Special brake pads ²⁾ , shock absorbers ²⁾ and springs ²⁾
164	200	Ventilated discs, front wheels, special brake pads ²⁾ , type VR tyres
1800	140	None

¹⁾ Ferodo DS 11 front
Ferodo VG 95 rear

²⁾ Ferodo 2441

³⁾ de Carbon shock absorbers front, Volvo part no. 552189 or 552190
de Carbon shock absorbers rear, Volvo part no. 552191

⁴⁾ Front springs, part no. 552105, 552106 or 552134
Rear springs, part no. 552136 or 552128



Volvo 'Roadsport'

Even though you don't want to drive competitively, you can still like cars.

And a lot of the things which competition drivers use can also be suitable for normal cars used for driving to and from work or for weekend trips to the country. With friends or with the family.

Just think, for example, how much a front spoiler does for the appearance. It sharpens the performance of the car at high speeds and helps to cut down wind resistance, and consequently fuel consumption. The top speed is raised. If it's made in the right way of course.

Volvo Competition Service makes them in the right way. Both for older and newer models. A spoiler is an original accessory, as painstakingly produced as every other Volvo original.

Furthermore, have you considered the enormous amount of development work behind

one small feature? Take, for example, such a simple item as the decorative side stripes.

You can't use just anything. First, it has to stay put, regardless of boiling sun or falling snow, rain or splashing mud. But it should also be possible to take it off. For you might change your mind and want a new design.

Or you might want to change your car and show that you have taken good care of your old one and used the right accessories. Even down to the last minute detail.

The spoiler and the stripes are two such details. Perhaps you don't think about it, but rather everything else which makes car ownership more enjoyable and the car more distinctive.

Tuning kits can be fitted even if you never think of setting foot - or car - on a track. For the B-20 engine there is, for example, an approved GT kit. It contains a special inlet manifold, a Solex downdraught carburetor

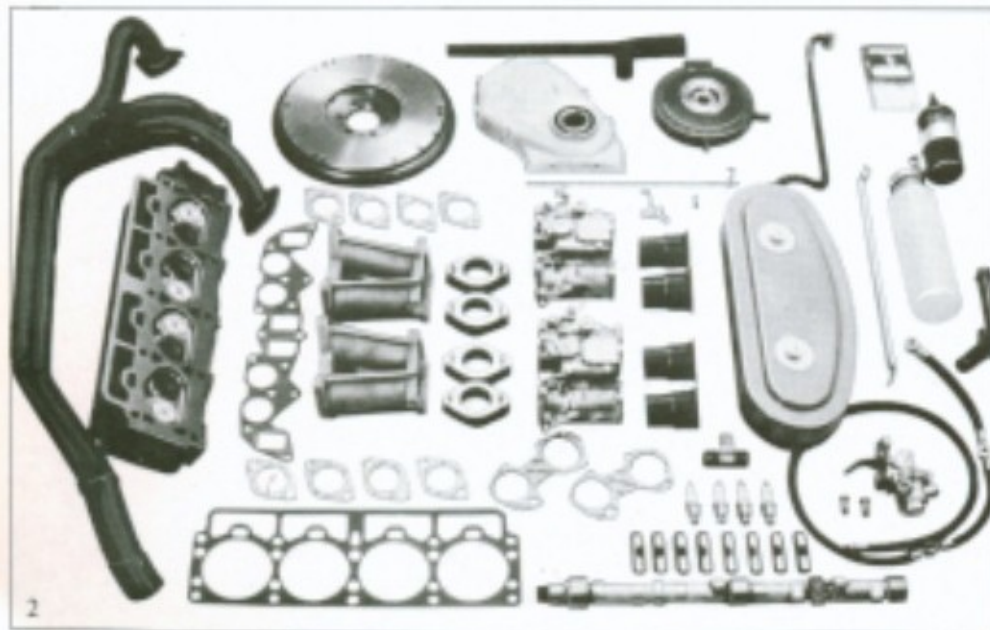
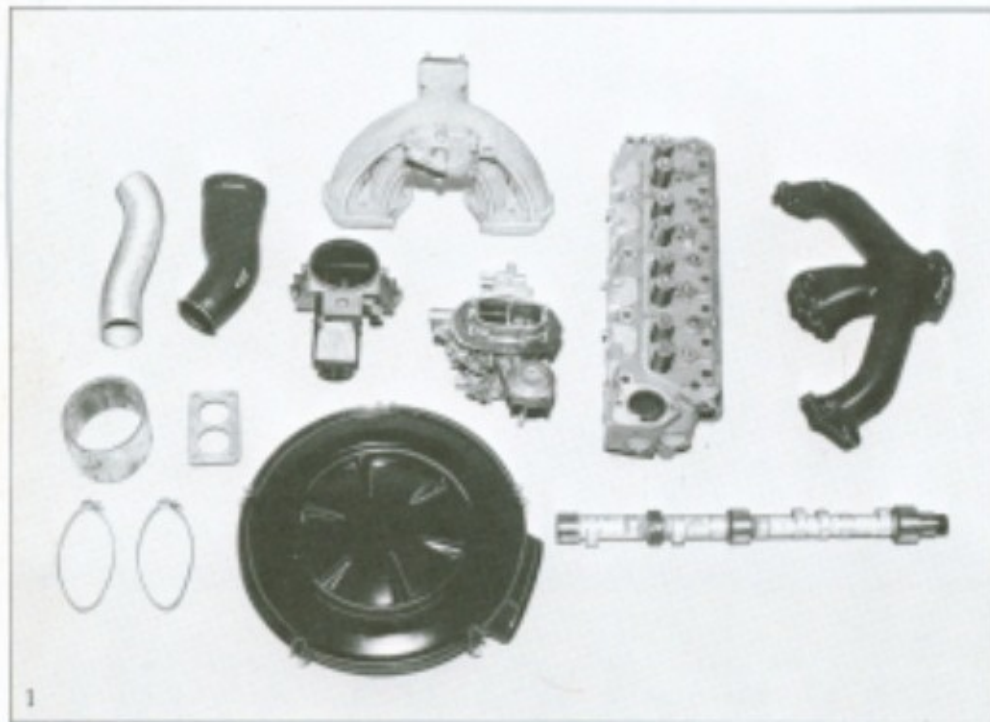
with a pre-heater built into the air filter. It contains a new, sharper camshaft with more lift and improved timing; a manifold which has a double outlet; a cylinder head which is shaved and, has larger ports.

This GT kit is suitable for a variety of driving - even in town traffic. Fitted to a B-20 engine it gives 125 "horses". In combination with a rally exhaust system it sounds nice - not too loud - just right. So that the neighbors and the authorities nod happily. But before starting on the engine there was something about 'feature tuning'. And here the same rules apply to both the private motorist and the competition driver - begin with road-holding, brakes, wheels, tires, interior...

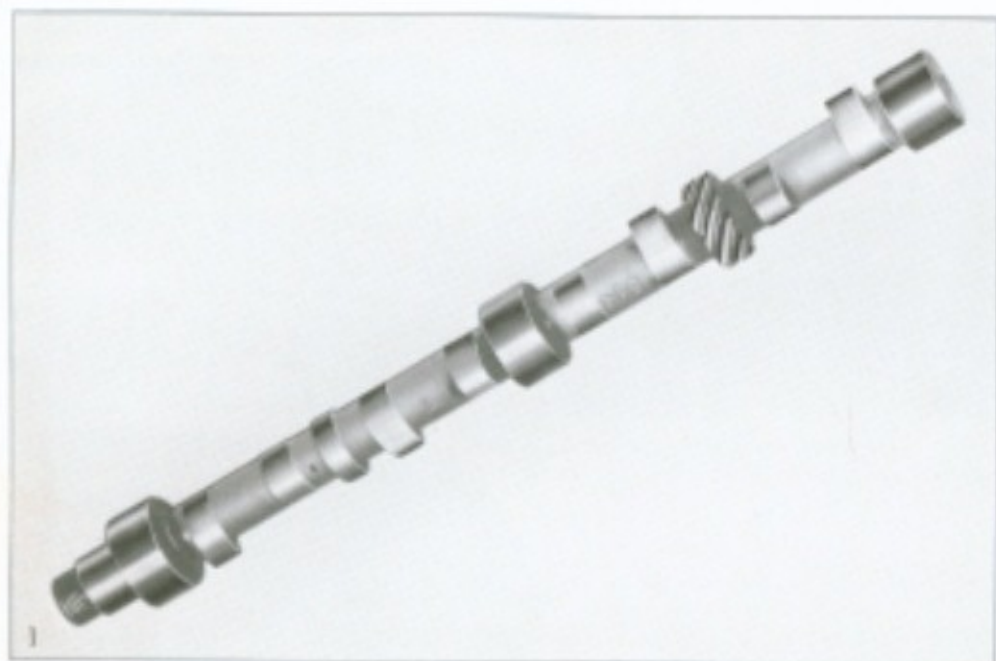
The problem of instrumentation is easily tackled with Volvo's GT instrument panel. This has a speedometer, tachometer, volt meter, gauges for temperature, oil pressure

Volvo 142/144

- 1 The Volvo GT-kit increases the output of a new standard B20 engine to 125 hp DIN. Among its features are a high-lift camshaft, a new induction manifold and a specially cast exhaust manifold with twin down-pipes. The cylinder head has modified induction ports, large valves and a higher compression ratio.
- 2 The Volvo tuning kit gives the B20 engine even more power. Stage II yields 160 hp and consists of a special cylinder head with 44 mm inlet valves, F camshaft with lightened tappets, new induction manifold, an extractor exhaust manifold and all attachment parts. Stage III kit yields 175 hp DIN. Note: the airfilter assembly shown below is different for RHD cars.



Other accessories



1 High performance camshafts are available in various types to suit the degree of tuning.

2 An extractor exhaust manifold.

3 Progressive-rate rally springs.

4 Close ratio gears for the transmission.

5 A reinforced clutch and disc are needed in a rally car to withstand the high engine output.

6 A carburetor kit for the B20 engine.



Walker/LeBeau's Volvo: How It's Done*

In the understandable excitement over John Buffum's near-total dominance of performance rallying this year, it's been easy to forget the supporting cast. One of the more successful of those has been the team of Jim Walker and Joe LeBeau in a Volvo 142. Walker has gone about his rally career in such a way that any aspiring rallyist could emulate him in easy and not-unbearably-expensive stages.

He built his current mount in 1972. On the car's second outing – the Press On Regardless – Walker rolled it, got it upright again, and went on to finish eighth overall in the 2000 mile car-killing event.

The following spring Walker and the Volvo won their first national event, the SCCA "Twenty Stages" Pro Rally. A few weeks later the Volvo added another page to the lore of rallying. At the FIA rally, Rideau Lakes, in Ontario, on a stage called White Mountain Road, the car came over a rise and launched itself into mid-air. For the next three seconds there was no sound save the swish of car through air. When it fell to earth over 200 feet from the launch site, Walker put his foot down and proceeded to beat the target time of the stage – something that no one had ever done. The next year they didn't bother with target times.

In 1974 the Volvo claimed three firsts in SCCA Pro Rallies. Walker ended up second overall in the drivers' standings, and would have won if he hadn't rolled the car while leading the Happiness Is Sunrise rally in New York.

In 1975 Walker's driving helped bring Volvo to within one point of the SCAA National Pro Rally Championship behind Datsun. Oh yes, he rolled the car again, this time at the Sunrider 400 in Ohio.

After four years of that kind of beating, one would suspect that the Volvo was ready to go to Valhalla (after all, it is Swedish). Not so. A new rally sanctioning body, called the North American Rally Association, was formed in 1976 and Walker and the Volvo took a first and a second in the first two NARA events.

LeBeau, a veterinarian toxicologist, is Walker's co-driver. You would think that

someone with all that education might have more sense than to ride through the woods with a hot-shoe in a rally Volvo.

"All a co-driver or navigator needs is the ability to follow directions, read in a car without getting sick, and trust in his driver. Of course, it helps if you are a bit crazy." Of course, Walker wasn't always a world beater. Like everyone else, he's paid his dues – but he did it in a sensible fashion.

To begin with, Walker's choice of a car – the Volvo – was not left entirely to chance. He was... he is... let's see, how does one phrase this delicately? What the hell, Jim Walker sells Volvos for a living. There you have it, right up front. He hustles Volvos to keep the wolf away from the door. Before that he sold insurance and before that, encyclopedias. He has always had an active interest in cars, and while he was a student at the University of Michigan in Ann Arbor an opening came up at the local Volvo dealer. Jim jumped at the chance to merge his hobby and his vocation. At the same time he met Hal Easton who told him about a new kind of rallying going on in Michigan. It was clandestine, it was nocturnal, and it was fun.

Jim had been running time, speed and distance rallies with his father since 1961, but nothing in that had prepared him for the experience of riding all night down dirt roads running flat out. After a few events he convinced Hal that he ought to navigate while Jim drove. The first time he tried it, Jim knew he had found his sport.

They were running in a Volvo 122 without any particular success, mostly because the car was not properly prepared. They then bought a '68 122 and set it up to be a real rally car. The new car was an ohmygod improvement, meaning they began running better. They were third at the 1971 Press On Regardless. The 122 was a fine car, but it needed more power. Before Jim could do anything about it, fate stepped in. While trying to decide what to do next, he was selected one of the top Volvo salesmen in the world. The prize? A trip to the Volvo works in Sweden.

It was there that Jim met and spent hours

with Gunnar Andersson, the director of Volvo Competition Service. Andersson was the man behind the three World Rally Championships that Volvo has won. He has been both a driver (twice European champion) and a builder. Jim was overwhelmed by the hospitality of Andersson and his people and by their willingness to help. Now he couldn't wait to build a car.

In June of 1972 he took delivery of a new 142 and went to work. From his own experience and the advice he had received from Volvo Competition, he prepared dozens and dozens of pages of carefully detailed notes of exactly what he wanted to do to the car. The notes were very thorough ("Lighten the ashtray. Blueprint the engine."). He kept records of everything. Every pound of weight that was removed or added was recorded; every part number was recorded; the amount of weight on each wheel was recorded; everything was recorded.

The car was prepared by the book. The book in this case was entitled "Volvo Parts and Equipment Catalog" and is published by the U.S. arm of Volvo Competition Service which is part of Volvo Western in Torrance, California. Wayne Baldwin runs the show at Comp Service, and his book contains everything a Volvo freak could want – from jacket patches to blueprinted engines. Any Volvo dealer can order the stuff, and anyone can call Baldwin for advice, specs or prices. Before the department was established, Walker was forced to get his parts directly from Sweden. Not very convenient, and the air freight was expensive.

Walker went the whole route in setting up the car. First, it was completely gutted. Everything that could be removed was removed, including the undercoating – a job that took five days and 80 gallons of solvent. (Says Jim, "May be the ultimate in messy jobs, especially in July.") Next came the installation of the Volvo Safari kit. Sounds simple enough until you find that the Safari kit consists of re-enforced body and frame parts which must be welded in place. What with the things that have happened to the car, it would seem that the Safari kit was worth the work.