



# Building two racers from a Lone Star and Arens chassis

☐ Here's the scenario. Back in the mid-'90s there were only two companies making aftermarket racing frames. Today there at least seven companies that make Honda 250R-style racing frames. They, of course, have a variety of price ranges as well.

One of the companies that has been around for a long time is Lone Star Racing out of Phoenix, Arizona. They make several different frame styles, including the standard 250R MX version.

One of the relative newcomers in

the business is Arens Brothers Racing out of Michigan. John Arens is the main man at the company and has an extensive engineering background. His company only offers the 250R copy and is more affordable than most of the frames out there.

## CHASSIS COMPARISON



 Everything bolted on to the Lone Star frame fine, but some aftermarket performance pipes won't fit without some tweaking.



The trick carbon fiber front fender on the Lone Star quad is from Quad Tech ([520]680-1004) and costs \$165.

Our quest this month was to purchase one each of these frames and then build a couple of full-on motocross rucers from the ground up. In many ways, the components used to complete the projects would be identical, so we could get a good idea of how these frames might differ. However, there are some differences in the powerplants and some of the frame add-ons had to be of a specific brand to fit correctly. After the racers were completed, we took the guads out to the challenging Glen Helen Raceway near Los Angeles to see how they worked on the track.



The Arens 250R-style frame has proven to be plenty tough, with over 4000 tough racing miles on this unit with no failures.

### CHASSIS COMPARISON



Both quads feature a pro-level suspension package consisting of TCS Sag Control System shocks all the way around.

#### **BOLT-ON STOCK PARTS**

Some aftermarket frames allow you to bolt-on most of the stock components, while others can only accomodate aftermarket A-arms and swingarms specifically made to that particular frame. In this case, both the Arens and Lone Star frames are what we call "replacement" frames, which leature the same geometry and shock mounts as the stock Honda FourTrax 250R chassin.

Both frames feature a removeable rear subframe, something that the original stock chassis didn't have. This way, if you happen to have a tough flip on the rocetrack and bend the vulnerable rear subframe, you can replace just that part rather than having to buy a whole new frame. Altermarket frames are generally considered to be stronger than stock, as well as being a few pounds lighter.

Since they realistically offer no better handling than stock, our test would be to see how well the parts fit on each frame and their long-term durability.

#### COMPARING THE FIT

Most of the components we added to the two frames (see accompaning spec

	CHASSIS	
	Arens	Lone Star
A-arms	CT +2	Lone Star +2
Swing Arm	CT'88 length	Lone Star '88 Length
Steering Stem	Laeger	Lone Star
Linkage	Stock	Stock
	Footboe +2	
Brerkon	Hreating Paris	Breaking Pads
Gearing	14/37 Sunator	14/37 Sumetor
Chain	Trubaki Omega	
	TCS Sag Control System	
Regr Shock	TCS Sag Cantrol System	TCS Sup Control System
Front Bumper	CT	Graydon Pro-Line
Grab baz	CT	
Neef Bax	Graydon Pro-line	Gravdon Pro-Line
Air Bor	CT	Lone-Star
Axle	Durg-Bloo Ehmingtor	Lone-Star
	Durg-Blue	
	Durg-Blue	
	CONTROL	

	CONTROLS			
Borr	Tog		_Tou	
	.Motion Pro			
Clutch Lavor	Work Connection	10000	Work Connection	
Cables	Motion Pro		Motion Pro	
Rear Brake Jever	. '96 CR 250	***************************************	96 CR250	

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		GINE	
		GT Pro-X 350 Power	Valve
		CT National FV	
		DomePro-X Interchangea	
		ForceMoto Tassanan/Dub	a V-Force
		CT Midronge/ CT	
		38PWK Air Striker	
Piston	.CT Mod Wiseco	CT Mod Wiseco	
	PRO-X		
Clutch Benket	Hirmon	Hinson	PH. C.
Icmitton	_2000 CR 250/CT Backing	Plate2000 CR 250/CT Box	King Plate

	COSMETICS		
Plantic	Stock Honder	Stock Honda	
None Piece	.86 250R	Ound Such	
Graphics		CT Zing	
Radiator Scoop	CT		

# CHASSIS COMPARISON



Racing quads are all about function. Weight is saved on these aftermarket frames by eliminating unneeded tabs and mounts.



Both engines are big-bores, consisting of 350cc of raw twostroke power. They also feature Pro-X Interchangeable Domes and a 38mm PWK Air Striker carburetor.

list) fit with no problems at all. The exceptions were that the Lone Star frame doesn't have good mounts for aftermarket exhaust pipes, since they eliminated a stock headstay mount. The Arens frame, on the other hand, cannot use a stock steering stem without grinding. It will, however, accomo-

date an aftermarket steering stem.

The Arens frame comes with a '96 CR250 motorcycle aluminum brake pedal, which is a much better component than the ATV unit. Both of these frames utilize a linkage in the rear shock mounts.

Workmanship and appearance

appear to be equally good on both units, which utilize chromoly steel throughout the frame.

#### LONG-TERM TESTING

Of the two frames tested here, we actually put the most time on the Arens chassis. It was run in the 24 Hour Team Race and won the Open





# CHASSIS

division. Then it was entered in the Nevada Rally (six days 2000 miles) and wan the Overall. The same trame was also run in three of the PACE Stadium Series events and five or six desert races. It's estimated that there's about 4000 tough miles on this single frame. All of this with no failures at all.

The Lone Star frame, on the other hand, developed a crack in the frame by the footpeg after only a couple of races. Our particular test rider had used this same frame before and had similar problems with frame cracking. From our experiences, it seems the Arens chassis is much tougher than the standard Lone Star frame.

#### PRICE AND CONTACT

The Arens standard 250R frame sells for \$1850 and can be purchased from CT Racing at (552) 945-2453 or direct from Arens at (517) 593-2593. They also sell aftermarket Honda 250R A-arms (\$565), swingarm (\$529), and steering stem (\$249).

The Lone Star standard 250R frame sells for \$2310 and can be purchased from Lone Star at (800) 457-7223. They also sell aftermarket Handa 250R Arms (starting at \$734), swingarm (\$524), and steering stem (\$354).

