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Generators with Parallel Capability allows you to connect two portable generators, increasing or almost doubling your power output. So here is our guide on how to parallel two Honda Generators. If your model does not come with an exclusive companion unit, you can still parallel most inverter generators with the help of parallel cables that have a 30-amp outlet. These cables allow you to connect two of the same generators when there is no companion unit available. If you are wondering how to parallel two Honda Generators, then this article is for you. We have prepared a simple step-by-step guide to take you through the whole process. With Parallel operation, you can link two Honda EU2200i or EU2000i generators together using a special parallel cable kit to get as much as double the power output. This gives you extra power when you need it without having to trade up for a larger heavier single generator. NOTE Operating a generator can be dangerous if used improperly. Always refer to the owners manual regarding the safe and proper operation of your generator. Generator exhaust contains carbon monoxide which is a poison you can't see or smell. So avoid using a generator inside a home or garage even if the doors and windows are open only use it outside far away from windows doors and vents. The companion versions of the EU2200i and EU2000i generators provide a built-in 30 amp receptacle. These models are designed specifically for parallel operation with another EU2200i and select EU2000i models. You'll be able to use the 30 amp outlet on the companion to draw the full combined power of the two units. It's perfect for RVs and for home use with the transfer switch or wherever a 30 amp outlet might be suitable. You can easily purchase Parallel operation cable kits from authorized Honda power equipment dealers. All EU2200i Honda generators can be connected to another EU2200i or EU2200i companion generator as well as select EU200i model generators that have specific frame serial numbers. The table below shows the compatible frame serial number ranges. Compatible ModelsFrame Serial Number RangesEU2000i / EU2000i CompanionEAAJ-2017305 thru EAAJ-9999999EACT-1000001 thru EACT-9999999 To parallel, the EU2200i generator with another generator follow these simple steps. With both of the engine switches in the off position, connect the parallel cable labeled L to the left parallel outlets, then, connect the cable labeled R to the right parallel outlets. Attach the ground terminal from each parallel cable to the corresponding ground terminal on each generator and tighten each screw securely. Start each generator and confirm that the green output indicator is illuminated on each. If using the eco throttle be sure that both generators are set to Eco throttle ON, once both generators are started. The EU2200i models are equipped with a 12 volt DC charge port that when used with the Honda accessory battery charging cable can charge a weakened 12-volt automotive-style battery. NOTE The DC charge function should not be used to charge the battery long-term as the voltage is unregulated which could damage the battery if left unattended. Plug the accessory charge cable into the DC receptacle. Connect the red lead of the accessory cable to the positive terminal of the 12-volt battery followed by the black lead to the negative terminal of the vehicle battery. Start the generator with the Eco throttle switch off and allow the battery to charge. Do not attempt to start any vehicle while the generator is running and the charr cable is connected to the battery otherwise generator damage may occur. To disconnect the battery charge cable turn the generator off and disconnect in the reverse order of installation. Yes, generally you can parallel two different generators. Although some of the models do not come with special companion units but you can still parallel most pf the inverter generators using parallel cables having a 30-amp outlet. Yes, you can easily parallel two Honda generators using a special parallel cable kit. Parallel Capability allows you to almost double your power output. You can easily double your power by linking two identical wattage EU generators in parallel with the help of Honda Parallel Cables. Get more power without sacrificing your portability. It allows you to link together two EU1000 or two EU2000 to almost double your power output. There's no need to you buy a large, bulky generator when your generator is parallel capable. This parallel cable perfectly fits with EU1000/EU2000/EU3000 Honda generators. This parallel cable is suitable for EU2200i / EU2200IC / EU1000 / EU2000 Companion / EU3000 Handi generators. It is made up of reliable quality material and anti-stretching. So, easily connect two identical wattages EU generators in parallel whenever you need more power output. With the help of this cable, you can parallel two Eu2000i or Eu2200i without using Companion. Whenever in need of more power parallel your two generators and enjoy! For any additional information regarding the installation and operation of these or any Honda, accessories refer to your owner's manual or contact your Honda power equipment dealer. 33 Honda generators are renowned for their reliability and efficiency. Running these generators in parallel can significantly enhance their power output and versatility. This article provides a detailed and professional guide on how to run Honda generators in parallel, covering everything from the basics to advanced techniques. Understanding Parallel Operation for Honda Generators Parallel operation involves connecting two or more generators to work together as a single unit. This setup allows for increased power output, better load management, and improved redundancy. Honda generators are equipped with parallel capability, but understanding the fundamentals is crucial for achieving optimal performance.What is Parallel Operation? Parallel operation refers to the process of linking multiple generators to combine their output. By doing this, you can scale up your power supply to meet higher energy demands. This is particularly useful in scenarios where you need more power than a single generator can provide.Benefits of Parallel Operation Increased Power Output: Running generators in parallel allows you to achieve higher wattage. This is essential for powering larger appliances or multiple devices simultaneously.Enhanced Redundancy: If one generator fails, the other can continue to operate, ensuring a constant power supply and reducing downtime.Flexibility and Scalability: You can start with one generator and add another as your power needs grow, providing a scalable solution to changing energy requirements. Preparing for Parallel Operation Before you start running Honda generators in parallel, several preparatory steps must be taken. Proper preparation ensures safety, efficiency, and the longevity of your equipment. Check Generator Compatibility Not all Honda generators are designed for parallel operation. Ensure that the models you plan to use are compatible with each other. Compatibility can typically be confirmed through the generator's specifications or user manual. Acquire the Right Equipment Parallel Cables: Use the manufacturer-recommended parallel cables to connect the generators. These cables are specifically designed to handle the combined load of multiple generators. Parallel Kit: Some Honda generators require a parallel kit, which includes the necessary components to facilitate the connection between units. Safety Gear: Wear appropriate safety gear, including gloves and goggles, to protect yourself during setup. Location and Setup Choose a Stable Location: Place the generators on a flat, stable surface to ensure proper operation and safety. Ventilation: Ensure adequate ventilation around the generators to prevent overheating and to allow for proper exhaust of fumes. Power Down Before Connecting: Always power down both generators before making any connections to avoid electrical hazards. Connecting Honda Generators in Parallel The connection process involves linking the generators using parallel cables and ensuring that they are properly synchronized to work as a single unit. Step-by-Step Connection Guide Turn Off Both Generators: Ensure that both generators are turned off and disconnected from any load before beginning the connection process. Connect Parallel Cables: Attach the parallel cables to the designated ports on both generators. Ensure that the connections are secure and properly aligned. Attach the Parallel Kit (if applicable): If your generators require a parallel kit, install it according to the manufacturer's instructions. Power On the Generators: Turn on the generators one at a time, following the correct sequence as outlined in the user manual. Check Synchronization: Monitor the generators to ensure they are synchronized and operating smoothly. Look for any signs of imbalance or issues. Operating and Monitoring Once your generators are connected and running in parallel, it is crucial to operate and monitor them correctly to maintain optimal performance. Operating Tips Load Management: Distribute the load evenly across the generators to prevent overloading and ensure efficient operation. Regular Maintenance: Perform regular maintenance on both generators to keep them in good working condition. Follow the maintenance schedule outlined in the user manual. Monitor Performance: Keep an eye on the performance of the generators, including fuel levels, voltage output, and operating temperature. Troubleshooting Common Issues Imbalance in Power Output: If you notice an imbalance in power output, check the parallel connections and ensure that both generators are operating correctly. Generator Not Starting: If one of the generators fails to start, troubleshoot the issue by checking fuel levels, battery condition, and electrical connections. Overheating: Ensure that the generators are well-ventilated and not subjected to excessive loads that could cause overheating. Advanced Techniques and Considerations For more advanced users, additional techniques and considerations can further optimize the performance of Honda generators in parallel operation. see also: TOP 4 Whole Home Solar Generators Advanced Synchronization Advanced synchronization techniques involve fine-tuning the generators to work seamlessly together. This may include adjusting the frequency and voltage settings to ensure precise matching between units. Load Balancing Proper load balancing is crucial for efficient operation. Use load management tools or software to distribute the load evenly and prevent overloading of individual generators. Backup and Redundancy Consider implementing a backup power system to provide additional redundancy. This can include automatic transfer switches or additional generators to ensure continuous power supply in critical situations. Conclusion Running Honda generators in parallel can significantly enhance your power capabilities and provide greater flexibility for various applications. By following the outlined steps and considerations, you can ensure a successful and efficient parallel operation. Regular maintenance and monitoring are key to maintaining optimal performance and longevity of your generators. FAQs: How do I know if my Honda generators are compatible for parallel operation? Check the user manual or specifications of your generators to confirm compatibility. Not all models support parallel operation. What should I do if my generators are not synchronizing properly? Ensure that the parallel connections are secure and that both generators are in good working condition. Consult the user manual for troubleshooting steps. Can I run different models of Honda generators in parallel? It is generally recommended to use identical models for parallel operation. Using different models may lead to synchronization issues and uneven load distribution. How often should I perform maintenance on my parallel-operated generators? Regular maintenance should be performed according to the manufacturer's schedule. This typically includes checking oil levels, air filters, and overall generator condition. What safety precautions should I take when running generators in parallel? Always follow safety guidelines outlined in the user manual, ensure proper ventilation, and use appropriate safety gear during setup and operation. Related topics: I have an older eu2000i and I want to buy another one to parallel it with. I would like to get the newer eu2200 to pair it with to get the extra 200 watts but mine falls below the recommended serial number to do this. The following info is from the honda website: EU2200i and EU2000i Parallel Operation The EU2200i are only compatible with EU2000i or EU2000i Companion models within a specific serial number range: EAAJ-2017305 through EAAJ-9999999 EACT-1000001 through EACT-9999999 Connecting an EU2200i with an EU2000i or EU2000i Companion that is not within the compatible serial range above may cause a low voltage output, which can damage tools and appliances powered by the generators. Units outside the compatible serial number range should only be paralleled with another EU2000i. Has anyone tried running the 2200 with a 2000 with with a serial number below the recommended serial number. Would I be better off going with another 2000. I didn't know that fact. I would not try it if Honda says not to. Maybe sell the 2000 and buy two 2200? I was not aware of that either, interesting. I am in a similar boat, got an EU2000i and debating on another to pair them together. If Honda sais its not doable, I woudn't. I am thinking I am going to hit up the used market for a 2nd EU2000i I keep finding them on craigslist with only a couple hours. I am buying a 2nd Honda Eu2000i generator so that I can run the AC unit on my RV by running it in parallel with the one that I already have. For those not familiar with the EU2000i, it and the other Honda inverter generators, as well as competitive units from Yamaha and some Chinese makers can be run in parallel with like units. They all seem to do it by just connecting the outputs in parallel before starting, and the electronics of the inverters take care of phasing. My question is, has any one here tried, or think it would work properly, if I connected each of my Eu2000i's to separate halves of a split-phase autotransformer (240V with a 120V center tap)? If they work by having the 2nd started unit automatically phase itself with the first by sensing the voltage, then this may work. If they send some carrier signal over the lines that might not make it across a transformer, then it might not. The reason that I'd like to do this, is so that these generators can do double duty of not only providing power for our RV when we're away, but also backup power at home. The only 240VAC load that I'd be running is our 1/2 HP 240VAC well pump, which runs fine off of the 3.3 KW Chinese clone of a Yanmar generator. The two Honda's in parallel can provide up to 4 KW for up to 30 minutes, and 3.2 KW continuously, but only a 120 VAC. I guess another way to do this, would be to just use a step up transformer for the well pump. I prefer diesel vs. gas for the home backup for several reasons, especially for the storage life of the fuel, but this little screamer (the Chinese diesel) is really loud. If I have gasoline on hand, I'd prefer to run the Honda's, at least for the overnight hours. Thanks in advance! Jay I do NOT have the definitive answer to the question, HOWEVER in looking at the question, you have made a critical Assumption error, while thinking about the problem. In any 120/240 Vac System, the Phasing of the two Legs, MUST be 180 Degrees apart, NOT zero (0) degrees as is required by Parallel Generation Systems. This can be done by using a transformer, with a Secondary Twin Winding, or a Center Tapped Secondary Winding, but NOT from two Inverter type Gensets that can be connected in parallel. My question is, has any one here tried, or think it would work properly, if I connected each of my Eu2000i's to separate halves of a split-phase autotransformer (240V with a 120V center tap)? Jay- There is a chance this could work, but there may still be a fly in the ointment. Under loaded conditions, there may not be enough coupling to maintain synchronization. What should work is to use parallel-connected generators to feed HALF of the autotransformer. Then 240 VAC would be available across both windings with power limited by the transformer's capacity. Such a setup would perform the same function as a transformer with 120 VAC primary and 240 VAC secondary. Which is best may depend on what transformers you can get your hands on. Fred I have a two-winding 2KVA transformer with a 240vac primary and a center-tapped 240/120vac secondary. I thought about just using it in reverse to run my well pump. Any problem back feeding the panel with an interlock device preventing the main and the backfeed breaking (double pole) from both being on, and connecting both poles to the paired (120V) Honda's, and then manually switching the pump over to the transformer produced 240VAC? That would NEVER pass an NEC Inspection, and if something caught fire, your Insurance would be Void. To be honest, I'm not sure how the Hondas would handle that operation, the inverters are designed to electronically sync together when the paralleling kit is used, but only for 120v and only to double their capacity. At best, it works as designed and everyone is happy, but it also might zap the inverters as well, rendering those (expensive) EUs nothing more than red boat anchors. Even worse, you're taking a gamble on your house electrical system with a setup that is very experimental, which could land you on the front page of the local newspaper if anything goes sideways. Now, both Honda and Yamaha make inverter generators that are rated for 120/240v, but they're not cheap. On the upside, though, you'll have a system that's designed for 240v with the noise reduction and fuel savings that those inverters offer. running the gens in parallel as they were intended and using only the 120-0-120 winding connect the paralleled gens to one 0-120 part and the house to the 120-0-120 keep the side of the house load that is the greatest on the side that is connected to the gens fuse the other side at the rating of the transformer. I doubt this will be enough to run a well pump the ones I have delt with are usually on 30A circuits I have a 7.2 KW 120-0-120 1800 rpm Kohler powered gen set I am fairly sure would it barely blinks at a window AC unit startup, its a keeper ---------- Post added at 08:37 AM ---------- Previous post was at 08:32 AM ---------- also be sure to shed all possible load forget about big electric draws just flip the breakers off electric driers, water heaters, stoves, ovens, AC if you want central AC think about 12KW or better gen ---------- Post added at 08:41 AM ---------- Previous post was at 08:37 AM ---------- please be sure to use all the correct bonding and legal transfer protocol ---------- Post added at 08:54 AM ---------- Previous post was at 08:41 AM ---------- PS does the little diesel have a idle set back? if so, running just the pump, it would scream only when the pump is running ---------- Post added at 08:58 AM ---------- Previous post was at 08:54 AM ---------- still money would be better spent on a larger 120-0-120 inverter gen for the quiet night time use Checking the manual on my Yamaha EF2000, in parallel operation it can handle 25A continuous, 30A starting at 120v (at 240v, this would be 12.5A and 15A), it should be identical for the Honda EU2000. Check the motor on your well pump for it's amperage rating, if it's anything over 12.5A at 240V, your two Honda EUs won't have the gusto to run the well pump. The biggest inverter generator Yamaha makes is the EF6300iSDE, and it can handle 22.9A running, and 26.3A starting at 240v, if your well pump draws less than this, then this is the way you should go. BTPost said "That would NEVER pass an NEC Inspection, and if something caught fire, your Insurance would be Void." What specifically violates NEC? As I understand it, reverse connecting single phase transformers larger than 1KVA is acceptable with no loss of rating or other adverse effects. If the proper interlocks are installed, what is in violation? What am I missing here? Larry Rusch Just ask your local Electrical Permitting Authority, if what has been proposed here, would pass their Inspection and see what they say. All the inspectors I know, would not pass such a setup. I am buying a 2nd Honda Eu2000i generator so that I can run the AC unit on my RV by running it in parallel with the one that I already have. For those not familiar with the EU2000i, it and the other Honda inverter generators, as well as competitive units from Yamaha and some Chinese makers can be run in parallel with like units. They all seem to do it by just connecting the outputs in parallel before starting, and the electronics of the inverters take care of phasing. My question is, has any one here tried, or think it would work properly, if I connected each of my Eu2000i's to separate halves of a split-phase autotransformer (240V with a 120V center tap)? If they work by having the 2nd started unit automatically phase itself with the first by sensing the voltage, then this may work. If they send some carrier signal over the lines that might not make it across a transformer, then it might not. The reason that I'd like to do this, is so that these generators can do double duty of not only providing power for our RV when we're away, but also backup power at home. The only 240VAC load that I'd be running is our 1/2 HP 240VAC well pump, which runs fine off of the 3.3 KW Chinese clone of a Yanmar generator. The two Honda's in parallel can provide up to 4 KW for up to 30 minutes, and 3.2 KW continuously, but only a 120 VAC. I guess another way to do this, would be to just use a step up transformer for the well pump. I prefer diesel vs. gas for the home backup for several reasons, especially for the storage life of the fuel, but this little screamer (the Chinese diesel) is really loud. If I have gasoline on hand, I'd prefer to run the Honda's, at least for the overnight hours. Thanks in advance! Jay Yes hooking one Honda 2000 up to each leg of the transformer would work fine. I've tethered these generators to all different kinds of things. Between different brands, different sizes and I'd even tethered one to my house inverter and my inverter simply took the power and charged the off grid house batteries with it. No I didn't connect it to the generator input of my inverter I literally connected my inverter's output to the generators output turned on the inverter and then started the generator. The problem with that was because it wasn't connected to the generator input it was unregulated so it would charge the batteries indefinitely it kept trying to push the voltage higher and higher. It did work fine though during the bulk charge stage. It's just that it didn't stop at the absorb and hold there. It would just keep going higher. I never tried tethering the Honda generator with a square wave or modified sine wave. Only pure sine wave devices. PS anyone giving me crap for reviving an old thread needs to shove it. This thread was never properly answered until now. I remember this thread and a couple others like it. I kinda figured one could do some crazy stuff with the inverter sets, but hard to 'prove' unless you have access to many sets and are willing to put your money where your mouth is. I think if I was going to 'series' two sets to get a standard hot-neutral-hot, I'd run a transformer in parallel to the generators to help keep balance. I suspect these sets parallel by being 'exactly' 120vac 60.0hz, and just allowing the balance to fall where it wants to. The parallel jacks are just right off the output of the set, so it would seem the magic can't be too complicated.... Interesting. If I'm understanding the original question, they were trying to get 240 single phase out of two 120 gens. I'm asking because I want to know/learn: If these sets were in series, how would you actually do that? I don't know anything about this type of gen (and limited about other gens). Would the wiring be hot-neutral-hot off the gens to the house? Would the gens be grounded? Would there be a neutral ground bond at the gens? Would they actually be 240 single phase or will they fry each other? Is this even possible? Bruce Interesting. If I'm understanding the original question, they were trying to get 240 single phase out of two 120 gens. I'm asking because I want to know/learn: If these sets were in series, how would you actually do that? I don't know anything about this type of gen (and limited about other gens). Would the wiring be hot-neutral-hot off the gens to the house? Would the gens be grounded? Would there be a neutral ground bond at the gens? Would they actually be 240 single phase or will they fry each other? Is this even possible? Bruce Most inverter generators have parallel ports that allow you to stack them to double output. They sinc to each others output sine wave. He's trying to fool them into making 240v. Most inverter generators have parallel ports that allow you to stack them to double output. They sinc to each others output sine wave. He's trying to fool them into making 240v. Yeah, I gathered there was some trickery involved. Just not even sure what they were talking about was even possible. Old thread. There seems to be a little of "old thread" revival going on lately. Yeah, I gathered there was some trickery involved. Just not even sure what they were talking about was even possible. Old thread. There seems to be a little of "old thread" revival going on lately. I'm interested to see how it argues out myself. I've been a little too foggy headed to put much brain power into it myself.. If they literally work by simply paralleling the outputs, then there's no reason they shouldn't work through a transformer. I'd use a 120/240 volt autotransformer here as then it only needs to equal the capacity of one generator to allow you to take the full power of both generators from either line at 120 volts or of course have full power at 240 volts. If the generator outputs are bonded to their chassis you want to ensure that each generator neutral is connected to the common point on the transformer. Keith I was thinking of Back-to-Back. 240vac center tap transformer, it could be a single winding or several, but only use the 240v center tap. Center tap to both neutrals, and each gen feeds one leg of 240. The transformer just helps enforce sync. My gut feeling is it is possible, and you could even stack more generators on to add capacity. Hard to say if it would work well. What is less clear is if the hassle and complication makes any sense, and who would have a truckload of inverter sets to do this with. Interesting. If I'm understanding the original question, they were trying to get 240 single phase out of two 120 gens. I'm asking because I want to know/learn: If these sets were in series, how would you actually do that? I don't know anything about this type of gen (and limited about other gens). Would the wiring be hot-neutral-hot off the gens to the house? Would the gens be grounded? Would there be a neutral ground bond at the gens? Would they actually be 240 single phase or will they fry each other? Is this even possible? Bruce AC is a waveform. The 120 volt AC isn't always 120 volts. It ramps down to 0 and then back up again 60 times a second. Imagine the original posters intent like this. The transformer he speaks of is much like a teeter totter at a kids playground. The generators are sitting in seats at opposite ends. So instead of sitting together in one seat going up and down together in voltage they rise and fall opposite of each other but they're both working to make it rock therefore making a difference of 240 volts between them. The magic part about this teeter totter is it only needs one generator to operate and having output of 120 & 240 at the same instant in time. Yes the teeter-totter will feel the weight difference between the two seats but the one generator pushes hard enough to reach the top regardless of the other generator being missing. Im Curious how the inverter would react to being hooked directly to a transformer. They are a bit picky about the loads that they "like". Have 4 manuals...No help...Where are M1-M2-M3-M4 termainals located...I really spent time looking...What place do I open, to access them?.....Charlie Re: switching from 120 to 240 three wire 6.5 NH Need to have your full model and serial number to see what you have. Wiring depends on your voltage code. Re: switching from 120 to 240 three wire 6.5 NH On my CCK sets, they're in the "AC output box", located by the ignition coil - not sure about your NH, though... Re: switching from 120 to 240 three wire 6.5 NH The leads are in the 4X4 box mounted on the top side of the generator. Re: switching from 120 to 240 three wire 6.5 NH And. If it is a single voltage machine, which you would be able to ascertain with the voltage code, you'd have fun trying to change the voltage..... Re: switching from 120 to 240 three wire 6.5 NH Model and Spec No. 6.5NH-3CR/16004P Serial No. J853 943551 Ac volts 120/240 Ph 1 KVA 6.5 Data plate Kw 6.5 Pf 1.0 Amps 54/27 Hz 60 Rpm 1800 12Bat. Re: switching from 120 to 240 three wire 6.5 NH Unless someone has screwed up. You should have the 4 M wires in the junction box. Re: switching from 120 to 240 three wire 6.5 NH We are ready for some pictures c east soon..... too much nasty out there...Charlie Yours is just a few months newer than mine. The wires are in the main control box as Billy stated. Honda generators give you optimal paralleling capability to double your power output without the need to trade in for a larger, less portable generator.Here's a simple guide on how to connect two Honda EU2000i generators to optimise your power output. Let's have a look: How To Parallel Two Honda GeneratorsParallel capability is an extra benefit of inverter generator technology, allowing users to connect two units using a specialised cable link. You can link two EU10i's, EU22i's, two EU30u-Handy's, or two EU30is' generators together to double your power output, as long as you are connecting two identical units. Here's how to safely connect two Honda EU2000i generators together:Step 1Ensure both engine switches are off. Next, connect the L parallel cable to the left parallel outlet, then connect the R cable to the right parallel outlet. Step 2Attach the ground terminal of each parallel cable to the corresponding ground terminal on each generator. Fasten each screw tightly. Step 3Start each generator, making sure the green indicator light appears on each unit. If using the eco throttle setting, ensure that both generators are set to 'Eco Throttle On'.Note: Remember to only use one generator as the master, connecting all appliances to one unit only. Step 4After connecting and monitoring your Honda generators, you can begin to load them. Start by plugging in the equipment with the highest power demand, such as air conditioners, refrigerators or power tools. Then, you can gradually add more appliances - just be sure not to exceed the generators maximum wattage capacity.Can I Parallel Two Different Size Generators? No. You can only parallel two identical Honda units together. However, there is an exception when trying to connect an EU2000i and the EU2200i, as long as it's within a specific serial number range: EAAJ-2032188 – EAAJ-9999999EACT-1000001 – EACT-999999We always recommend you check with a Honda generator supplier if you are unsure. Alternatively, Blue Diamond Machinery supplies a Honda EU22i 2kVa combo package with parallel cable for your convenience. Get The Right Advice, Contact Us TodayWith years of experience, you can rely on Blue Diamond Machinery to provide the right advice and a generator to meet your unique power output needs.For more information on the best model to suit your power requirements, contact us today or speak to one of our expert team on 1300 998 647. I have a Honda Generator E3500 with a G80 engine. I had a stuck exhaust valve which freed up easily after removing the head but now I need to reassemble it. Plano's website says the gasket is no longer manufactured. Any other source for the gasket, tips on reusing it, and the bolt torque pattern and torque amount are all helpful as well as any other info on the engine or generator. Can this be cross-posted to the generator forum? Thanks. Tom Tom- Honda's web site has links to both a downloadable owners manual for the E3500, and an orderable shop manual for the E/ES3500. Is it possible that the ES3500 uses the same engine and head gasket, and it can be ordered under that model number? Fred I have those owner's manuals. The e3500 manual shows a G400 engine. From the plano power website, the best info I have found so far, it is a pre-1980 engine with very little support for it. Thanks. I'm going to try plano on the phone again. I read the threads about silver/copper/aluminum paint and gasket sprays for reusing head gaskets. I'd also like to get a ballpark number on the torque spec for the head bolts. i'm guessing something around 25 ft-lbs. Tom I finally got Plano on the phone. They had a gasket in stock for $25 and told me that Honda no longer supports the engine and anything to be found is new old stock. The torque he said is 29 ft-lbs with no retorquing necessary. Tom You may have purchased an inverter generator with lower wattage that fits your original purpose, but now you need more power. What do you do?If your current inverter generator can run in parallel, you are in luck. Running two generators in parallel or synchrony can boost your power to meet your everyday needs. A parallel operation can save you the expense of buying a more significant, powerful generator.If you need to run high-draw appliances such as air-conditioners, a smaller watt inverter generator will not produce enough non-peak load watts to sustain power flow. Connecting another inverter generator can boost the power output enough to handle not only the a/c but also other appliances simultaneously.Suppose you are operating small electronic devices, such as computers or cell phones. In that case, the inverter generators offer a more stable and constant flow of energy to protect those sensitive items from damage.source: TheEngineeringKnowledge.comSimply stated, running generators in parallel means that two are running with their cables connected to a single line that delivers their combined power.The first step is the make sure the two generators are rated the same for the amperage and voltage they produce. Attempting to connect two different generators that do not match can cause damage to one or both.Match the alternator pitch – this must be compatibleBe sure the voltage output is the same on both generatorsEach generator must have the same frequencyYou must use a parallel cable designed to run between the generatorsThe second step is to connect both generators using a parallel kit designed for that purpose. Follow the directions provided in either your owner's manual or the parallel kit for the specific steps for your generator.There is a sequence to powering the generators, so be sure to follow the steps provided in your owner's manual or instructions from the parallel kit.The third step is to connect the generators via the parallel kit cable to the power (load) input for your home, business, or RV. Again, follow all directions precisely to avoid problems.You already have an investment in your current inverter generator. Buying a more significant higher watt generator will:Cost significantly moreBe more expensive to maintainBe less fuel-efficientBe louder to operatePossibly be more challenging to move or transportBe less likely to be compatible with your current generatorYou may be wondering why it is crucial to have "twin" generators in the parallel process. If you hook up an incompatible generator that has less power, the entire purpose will be useless. The system you have tried to enhance will be limited to the smaller voltage output.Running two inverter generators in parallel also has benefits beyond producing more power. They can:Be easier to maintain than larger generatorsBe easier to transportProduce more power togetherBe easier to control the load drawCan be run together or separately during an emergencyWhen considering your power needs, you may decide that you have different requirements for different times. If you live in an area prone to long-term power outages following storms, you will need to determine if your power needs will last for a few days or just a few hours. Will you need to keep refrigerators and freezers running to avoid food spoilage, or will you just need lights and small appliances?Each situation will be different, and the power needs will require either one inverter generator or two in parallel. If you have a 2500-watt generator (at normal load), adding a second 2500-watt generator in parallel will give you 5000 watts of power (at normal load) draw.Not every generator is parallel compatible. Most inverter generators have parallel capacity. Hopefully, the one you have will run in parallel, but if purchasing a generator for the first time, it is wise to get one that does. Check your owner's manual or go online to your generator's manufacturer to confirm your status.Once you know that your generator is parallel friendly, you can find a compatible generator by searching online manufacturers. You will find dimensions and statistics listed for each model, as well as parallel options.Know your wattage needs. If you know that you'll need more power (at times) than one generator can provide, you'll be able to figure the maximum capacity to operate two generators in parallel. For example, two generators rated at 2000 watts, in parallel they will produce 4000 watts.There are some design choices to consider when purchasing a generator:How far from the load will your generator(s) be placed? Longer distances may require more voltage.What type of fuel will you need to use?How many operating hours will your generator run based on the fuel tank size?Is there enough ventilation for proper cooling?What will your costs for regular maintenance be?Is the generator transported or stationery?These are all important considerations because they determine the end efficacy of the system.The cost is essential as you plan your budget. How much a generator will cost is going to depend on your use and the power needs.Your needs will vary depending on where you plan to use your inverter generator(s). While still well constructed, a stationary generator will not need the framework to protect it like those made for job site purposes. If you store it for use at your home, the costs may be less than needing generators designed for rugged outdoor use, camping, or worksites.Prices for a lower watt inverter generator may run from $350 and up, while a more significant wattage generator could start at $900.It is essential to consider the placement of your inverter generators when running in parallel. Remember that water is not a friend to your generator, so keeping them safe from humidity is vital. As well, maintain your generator(s) and keep them clear of dust and debris in a well-ventilated space.An important thing to remember is if one generator fails, you have a backup with the parallel generator. If you only have one large generator and it fails, you will be without power.Considering the size of your inverter generator, its location, and your overall power needs will determine your investment. Prior research will benefit your decision and prevent a poor choice when your family or business needs electricity the most.Parallel Generators How to Safely Run Two Generators at the Same TimeA generator parallel kit should work between them as long as they are equal in wattage and voltage. Check the outlets on both generators to make sure the plugs match.Running two inverter generators in parallel can boost power to meet your everyday needs. A parallel operation can save you the expense of buying a more significant, powerful generator.When the higher power is not needed, you can choose to operate one generator. When additional power is required, connect the second generator to double the capacity.As you can see in the graph posted at the top of the article, a parallel kit is attached to the two inverter generators. The power from the two generators combines before going into the load receptacle. The power output of each generator doubles going to the home, business, or RV.The answer is yes; however, they must both be of equal voltage and wattage. Always check the manufacturer's recommendations. Question regarding "full current" 120 vs 240 and load balancing (QuietPact 75) I've recently picked up a Generac QuietPact 75 RV generator. I got a smoking good deal on it, plus I've been in the need of a larger, quieter set for house backup (our utility sucks) as well as to serve double duty on the road as a power supply for a pair of 3000w xenon arc spotlights. I'm well versed in electric, from basic 240v 1PH residential to 3PH corner grounded delta's in commerical and industrial. That being said, I've never spent the time to full understand this aspect of my genset. I've lugged in numerous large rental units but never spent much time caring about load balancing on a rental unit. I hear that loading one side of the stator is generally a BadThing so I'm going to generally attempt to avoid that, however I'm having a hard time wrapping my head around this on my set. I've attached the schematics image from the owners manual on stator wiring options. As it sits, the genset is wired for straight 120v. This doesn't work in my application for a home backup generator due to electric baseboard heat in the addition, water heater and the dryer. Obviously I'll have to do some manual load shedding, but that's not a big deal. My concern comes with the spotlights. They draw 30.8A @ 120v each at full power. It's not uncommon to only go out to an event with a single light. With 2, they balance each other, but with one, I'm fully loading one side of the stator with absolutely no current on the other side. I've dealt with some smaller (~4kw) units that had a 120 - 120/240 switch. It was always my understanding that in 120/240 the stator was in series and in 120 it was in parallel, so I could either have 16A at 120/240 or 30A at 120. According to the schematic for the QP75, that's not exactly the way that it works for this genset. It would pretty clearly appear to me that even in straight 120v, the legs aren't fully paralleled, so instead of 62A @ 120, I'm still limited to (2) 31A legs across the (2) 35A breakers, which really gains me nothing versus that of a 240v with neutral connection. I can't figure out why it was even wired as straight 120, though this appears to be the default for Generac. Once you get past the smaller campers with 30A 120v 3 wire connections, you go to 30A 240v 4 wire and 50A 240v 4 wire. Originally I was going to put a 4 pole switch in and be able to switch between 120 and 120/240, but apparently it's not a viable option with Generac. I would assume leads 33 and 11 could be strapped and a 60A miniature breaker added to give me a high current, paralleled 120v connection, but I don't want to be a guinea pig on this one. So what is everyone's thoughts on A) the way Generac wires their stator and B) what I can do to not burn up the stator while running a single spotlight? Re: ? regarding "full current" 120 vs 240 and load balancing (QuietPact 75) The title should read 120 vs 120/240... Apparently there isn't an edit function.. Re: ? regarding "full current" 120 vs 240 and load balancing (QuietPact 75) Can the spot lights be re-wired to 240V? That would give you a balanced load with one, or two lights on if both legs were workng together for either load situation. Re: ? regarding "full current" 120 vs 240 and load balancing (QuietPact 75) John, they can infact, however I wanted to keep them wired straight 120 for two reasons. First, they have a permanent home at our haunted house from mid September through the end of October. I would have to re-run the wire which creates an additional three problems. We're a non-profit, volunteer based organization and as such, we have a very limited budget. I don't have the budget for a few hundred feet of 10/3, plus new L14-20 receptacles and plug ends. I'm also limited on time right now. The biggest issue is the panel that these come out of is at max capacity. I simply don't have the additional 2 spaces to convert from 30 amp single poles to 20 amp 2 poles. In addition, as it sits they can be run off of a 15 or 20 amp circuit depending on what options you turn on. For example, I can run it as a static 2000w light with no movement on a (dedicated) 15 amp circuit. If I can find a 20 amp circuit, I can turn the rotator on and lastly, I can run it at 3000w plus rotation if I have a 30 amp circuit. The flexibility is nice for a venue that may not need / want 3000w, then I can get away with finding a outlet that no one is using without having to lug into the panel. I lose the flexibility if it's converted to 240. Re: ? regarding "full current" 120 vs 240 and load balancing (QuietPact 75) One more reason, I have 200ft of 8/3 SOOW for when I do have power at the venue. That 8/3 would quickly become worthless if they convert to 240 since I would then need 10/4. Re: ? regarding "full current" 120 vs 240 and load balancing (QuietPact 75) Well here are my thoughts on - (A)- 2 separate "120V" outputs is a common configuration for an RV type generator. This lets a user strap the RV's two circuits together and plug in to a standard 120V outlet if need be. Either of the "120V" windings will be loaded to right at its full rating with one of your "3000w" lights on it. IMHO, there is nothing to gain by using one large breaker, as opposed to 2 35A breakers. In fact the 35A breakers insure that each winding is individually protected to some degree, if you parallel the two, how do you know one winding will not be "pulling" the majority of the load? With separete 35A outputs, you may have one circuit (and light) workable if (when) something goes wrong. If your 60A breaker trips and won't close back in, you are completely in the dark. If I were going to try a "parallel 120 volt" scheme, I would do so after the 35A breakers and hope for the best. (see statement "B") (B) Pray regularly and fervently to the deity of your choice. Unsolicited opinionated statement- If I were going to be "on the road" in a situation that required me to power a load such as the two lights you describe, I would (1) use a genset rated for 12kw or more. (2) make sure said generator was made by Onan, Kohler or PowerTech if at all possible. Re: ? regarding "full current" 120 vs 240 and load balancing (QuietPact 75) One more reason, I have 200ft of 8/3 SOOW for when I do have power at the venue. That 8/3 would quickly become worthless if they convert to 240 since I would then need 10/4. If all of your loads are 240V you will not need a neutral in your cord. You could change the ends of your cord to NEMA 6-50 plugs/receptacles and go right ahead. BTW, you are just over the current limit for less expensive 6-30 fittings. Re: ? regarding "full current" 120 vs 240 and load balancing (QuietPact 75) The 2 windings must be closely matched or the 240v connection would be asymetrical. With it wired for 120v, test with a meter between the 120v hot wires. There should be close to zero volts between the windings. If any shows add a light load across the meter to see if there is any power behind it. If little or no voltage the outputs can be paralleled. I believe that Generac did it this way so as not to need a higher current breaker. Good Luck Re: ? regarding "full current" 120 vs 240 and load balancing (QuietPact 75) Well here are my thoughts on - (A)- 2 separate "120V" outputs is a common configuration for an RV type generator. This lets a user strap the RV's two circuits together and plug in to a standard 120V outlet if need be. Either of the "120V" windings will be loaded to right at its full rating with one of your "3000w" lights on it. IMHO, there is nothing to gain by using one large breaker, as opposed to 2 35A breakers. In fact the 35A breakers insure that each winding is individually protected to some degree, if you parallel the two, how do you know one winding will not be "pulling" the majority of the load? With separete 35A outputs, you may have one circuit (and light) workable if (when) something goes wrong. If your 60A breaker trips and won't close back in, you are completely in the dark. If I were going to try a "parallel 120 volt" scheme, I would do so after the 35A breakers and hope for the best. (see statement "B") Hrmm.. I've been involved in lugging RV's into panels for a while now, so I have some knowledge there. It's never been with a small genset though, it's always carnie trailers on the fairgrounds and they get plugged in or lugged in straight to the panel. From what I've seen, the smaller trailers will have a "TT-30" aka "RV30" plug (120v @ 30A, two 45 blades with a ground), larger trailers move up to 4 wire 30A 240v or 4 wire 50A 240v. I guess what I'm not getting with Generac is also like what I said before, it seems everyone else (Honda, etc) either fully parallels their stator leads for high current 120v or runs them in series for 240v. Maybe I'm incorrect here, but with both hot legs of the stator bonded together ala Honda and all of the "big box store" gens, thus creating a "high current" 120v, it would make sense to me that it balances itself, being that current will flow with the path of least resistance. If it doesn't balance itself across the stator, then that shoots my theory out the window. This is why to me, you would have a single high current breaker as opposed to