VEHICLE OPS:

Repairs & Wear

INTRODUCTION

Repairs come in many forms depending on what is being fixed: *System Strain, Hull Trauma, Components,* or optional *Wear.* Repairs can range from simple rebooting of systems to routine maintenance to major work being done at a starport.

Most repair rules are covered in the Core rulebooks, but they are spread out and sometimes contradictory. Below you will find the core system summarized (with some house rule tweaks) along with expanded Spare Parts, Salvage, and Wear rules.

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VEHICLE OPS SERIES

This is a portion of the greater *Vehicle Ops* series of fan-made supplements. Each tries to provide greater detail to vehicle operations while not changing any core book rules, if possible. While each may be used separately, these supplements will sometimes refer to each other. See Sturn's Stuff for more.

REPAIR CHECK

The rules-as-written in the core rulebooks are extensive regarding repairs, but spread out and sometimes contradictory. The information below tries to bring all of these rules together in one place with only a few tweaks and optional spare parts to consider.

No matter the type of repair being made, there are similarities regarding the skill check itself. The basic repair of minor damage is an **Easy (◆) Mechanics** check. The more damaged something is the more difficult the task becomes:

Table 1: REPAIR SKILL CHECKS			
Damage Level (hits)	**Difficulty**	**HT/SS/Wear Damage**	**Gear/Component Penalty**
Minor (1)	◆	½ or less	■
Moderate (2)	◆◆	Exceeds ½	◆
Major (3)	◆◆◆	Exceeds	Un-useable
Destroyed (4)	NA	Exceeds 2x	NA

The Gear/Component Penalty applies to only gear or components which have suffered the corresponding level of damage. Using them for any purpose applies the penalty until repaired. Likewise the "hits" value is also for gear or components only. Criticals of the stated damage level apply this many hits to the gear or component, which are cumulative with future hits. See Gear/Component Damage in a sidebar below).

There are three types of repairs which are detailed in the following pages: Damage Control, Paid Repairs, and Self Repairs. All three use *Table 1: Repair Skill Checks* (above) and *Table 2: Spending Repair Results* (on the next page).

Suggestions on spending repair dice results:

Table 2: SPENDING REPAIR RESULTS	
Cost	**Options**
�µ	One un-cancelled �µ must be used to remove 1 point of HT, SS, Wear or reduce a component's or gear's damage level by one.
	Each additional �µ may remove more damage, or reduce time of repair by 10%.
⚘	Reduce required spare parts by 10% each.
	Vehicle recovers 1 System Strain while making repairs (only).
	Character recovers 1 Strain.
	Add ▢ to next allies' check regarding this vehicle.
⚘⚘	Free Maneuver, but can't exceed 2 Maneuvers per turn limit.
	Add ▢ to your next repair check regarding this vehicle.
	Reduce required spare parts used by 10% each.
✪ or ⚘⚘⚘	Downgrade the difficulty of your next repair check regarding this vehicle.
✪	Upgrade the next repair check regarding this vehicle.
	No spare parts are required for a successful repair.
	On a failure, immediately discovered what was doing wrong and stopped repairing – no time wasted on check. Not possible if an Action.
	Give a temporary boost to the vehicle, component, or gear.
✸	Increase required spare parts by 10% each.
	Vehicle suffers 1 System Strain.
	Character suffers 1 Strain.
✸✸	Vehicle suffers ▮ on the next check involving it.
	Character suffers ▮ on his next check.
✸✸✸ or ▽	Component or gear being repaired disabled for remainder of encounter.
	Vehicle receives 1 Wear.
▽	Hull being repaired suffers 1 Hull Trauma.
	While removing strain, system overloads causing 1 point of system strain per silhouette of the vehicle.
	A component or gear being repaired suffers Minor damage.
	On a failure, spare parts also used up.
	On a success, double the required spare parts or the attempt is a failure.
▽▽	A component or gear being repaired suffers Major damage.
	Vehicle receives a new critical hit due to a mishap.

DAMAGE CONTROL

Damage Control is a quick action to correct problems with a vehicle. This includes such things as rebooting systems, quickly plugging a leak with a nearby object, or rerouting a system through quick wire splicing.

Damage Control is a single Mechanics Action with difficulty based upon extent of damage (see *Table 1: Repair Skill Checks* above). No spare parts are ever needed for Damage Control.

System Strain: Difficulty is determined by the amount of System Strain compared to the vehicle's Strain Threshold. Success removes points of System Strain. System Strain Damage Control is repeatable. Also, automated vehicles systems recover 1 point of System Strain every day in which no new strain is suffered. Vehicles docked and plugged into the systems of a Garage or Capital Repair Dock will benefit from their bonus being applied to either the action or the daily recovery rate (the later with a bonus of 1 point per ☀, see *Table 3: Starport Repair Services*).

Hull Trauma: Difficulty is determined by the amount of Hull Trauma compared to the vehicle's Hull Threshold. Success removes points of Hull Trauma. Hull Trauma Damage Control is only allowed once per encounter in which the vehicle takes Hull Trauma. This represents quick and shoddy jury rigged repairs and Athletics may be used in place of Mechanics while adding one ◆. The referee may use ⚙⚙ or ▽ to have the shoddy repairs fail or cause some problem until regular repairs are made to the vehicle.

A mechanic may have to get outside of a vehicle to repair hull trauma. If a Moderate or Major repair, the referee should apply ■ for Moderate or ■■ for Major if the mechanic can't get outside of the vehicle to make the repairs (in combat, in space, etc). If the vehicle has suffered only Minor hull trauma damage, the repairs may be made from inside the vehicle.

Components or Gear: Damage control of a component or gear simply brings it back online. Difficulty is based upon the current damage level of the component or gear. Like Hull Trauma, this may only be attempted once. If brought back online, it will still suffer any use modifiers depending on its level of damage, which is not changed by damage control. Thus, a component or gear with Major or Destroyed damage will not be affected by damage control (it's still un-useable or destroyed per *Table 1* above).

Fault: Damage control may be attempted to remove a

GEAR/COMPONENT DAMAGE

Minor: Temporarily disabled, but nothing important damaged. Damage Control brings it back online, but a single "hit" of damage is retained. For components (only) no need to go to it for damage control and Computer may be used in place of Mechanics. Multiple Minor hits will up the damage level to Moderate or more.

Moderate: Disabled as physical damage is taken after taking 2 Minor hits. Damage control to bring it back online, but the 2 hits are retained.

Major: The component or gear is heavily damaged and inoperable until standard repairs are completed. Damage control is useless. Major damage may also be received after taking 3 hits worth of lesser damage. If 4 hits are received, the component or gear is destroyed.

Fault (see *Wear* below), but only once and only during the encounter which caused it. If failed, damage control can't be repeated – the fault is too difficult to repair quickly. Difficulty is based upon the fault type.

PAID REPAIRS

Actual repairs are much more then damage control. Repairs take time, tools, facilities, and spare parts to complete. System Strain never needs repairs since time and Damage Control will remove it. Facilities can be found to repair Hull Trauma, Wear, Components, Gear, and Faults, for a price. Regardless of size, paid repairs are the most common way vehicles get fixed.

Vehicle Paid Repairs require a Garage (silhouette 5 or less) or Capital Repair Dock (silhouette 6+). The grade of the Starport or Garage indicates the amount of hull trauma, wear, or levels of component damage that is repaired in a day. See *Repair Resources* below for more details.

Paying for *gear* to be repaired can sometimes be offered at shops that sale the gear. For example, you can pay for a blaster to be repaired at most gun shops. Paying for gear to be repaired usually takes a day. The owner drops the gear off and returns the next day. If the owner doesn't trust a shop or wants it done quicker, he's going to have to repair it himself.

See *Table 4: Paid Repairs* for cost per Hull Trauma, Wear point, or Component damage level. It's important to remember that needed tools, facilities, and spare parts are **included** in this cost and thus don't have to be accounted for separately.

Table 3: VEHICLE PAID REPAIRS	
Vehicle Silhouette	Paid Repair Cost Per HT, Wear, Damage Level, or Fault
1	200
2	400
3	600
4	800
5	1,000
6	5,000
7	20,000
8	100,000
9	500,000

Gear: Paid gear repair costs are based upon the value of the item and the extent of the damage: gear: Minor – 50%, Moderate – 75%, and Major – 100%. Since major damage costs the same as buying a new item, this is usually never done unless the gear has sentimental value. Some shops allow damaged gear to be turned in for replacement with a new item. This typically knocks off 25% from the above expenses (ex: trading a blaster in with Major damage allows purchase of a new similar blaster at 75% of cost).

SELF REPAIRS

Self repairs are done by a skilled mechanic to save credits or when a repair facility can't be found. Hull Trauma, Wear, Components, Gear, and Faults may be self repaired.

Spare parts are required for repairs (see *Spare Parts* below). **If the extra detail of spare parts is not desired, instead use the core suggestion of 500 credits per repair.**

Self Repair is a single Mechanics check with difficulty based upon the extent of damage (see *Table 1: Repair Skill Checks* above). A Self Repair may only be made upon vehicles of Silhouette 5 or less. Other vehicles are so extensive that such repairs must be performed by a repair crew in a capital repair dock.

Time: For most self repairs, time taken is 1 day per difficulty. For gear and patching (see below), time taken is 1 hour per difficulty. One repair person is required per silhouette of the vehicle, or the time for each Self Repair is increased by 1 day (or hour) per missing person. The mechanic making the repair check is counted in this requirement. A mechanic could receive help from other PCs or hire a Repair Crew (see *Repair Resources* below). If the check is failed, the time is still wasted.

Hull Trauma: Difficulty is determined by the amount of Hull Trauma compared to Hull Threshold. Each un-cancelled ☀ removes 1 point of Hull Trauma. Spare Parts are required per point removed or the success is lost.

A mechanic may have to get outside of a vehicle to repair hull trauma. If a Moderate or Major repair, the referee should apply ■ for Moderate or ■■ for Major if the mechanic can't get outside of the vehicle to make the repairs (in combat, hazardous environment, etc). If the vehicle has suffered only Minor hull trauma damage, the repairs may be made from inside many vehicles.

Gear & Components: Difficulty is determined by the damage level. Each un-cancelled ☀ lowers the damage level by one. Spare Parts are required per level lowered or the repair is lost. For gear, Spare Parts used are based on the level of damage and cost of the gear: Minor – 25%, Moderate – 50%, and Major – 75%.

Wear: Difficulty determined by amount of Wear compared to System Strain Threshold. Each un-cancelled ☀ removes 1 point of Wear. Spare Parts are required per point removed or the success is lost.

Patching: If a vehicle is inoperable due to exceeding hull threshold (but not yet destroyed), a **Daunting (◆◆◆◆) Mechanics** check may be attempted to get the vehicle running temporarily to limp it home (as suggested by Core rules). This is the proverbial duct tape rigging of a vehicle. Spare parts are not required for a patch job, but if they are used, downgrade the difficulty once to **Hard (◆◆◆) Mechanics**. Success does not remove any hull trauma at all, but allows temporary operation of the vehicle at Speed 1, -3 Handling, and upgrading of difficulty for all Pilot actions. Power is reduced so much that weapons and shields are inoperable (even if these components are in good shape). Other components (computers, sensors, life support, etc.) will be powered. Any further hull trauma taken to the vehicle immediately makes it inoperable again.

Faults: Difficulty is determined by the fault's difficulty. A single success is needed to remove the fault. Spare parts are treated as if removing a component damage level (200 x Silhouette of vehicle in credits). Note that spare parts may not be needed if the mechanic can instead get lucky with a Damage Control check.

REPAIR RESOURCES

While a landspeeder's faulty power converter can be removed and replaced with a common hydrospanner, larger and more complex vehicles require more equipment and facilities. Removing a section of hull plating for replacement can't be done without some sort of lift assistance. A destroyed sublight engine from a capital ship is not easily tossed aside. Luckily, equipment and facilities for such can be found at higher grade starports.

Table 4: STARPORT REPAIR RESOURCES						
Starport	Garage	Capital Repair Dock	Light Lifting	Heavy Lifting	Repair Crews	Spare Parts
A	✸✸	✸✸✸ up to Sihl. 9	Yes	Yes	Skilled 3	Yes
B	✸✸	✸✸ up to Sihl. 7	Yes	Yes	Skilled 2	Yes
C	✸	No	Yes	Yes	Skilled 1	Yes
D	✸	No	Yes	No	Unskilled	Yes
E	No	No	No	No	Unskilled	No
F	No	No	No	No	Unskilled	No

Basic Tools: Basic tools are required for any repairs. Without tools, the referee may determine the repair may not be made at all or one to several ◆ may be applied. If the attempt may be considered dangerous (repairing a fusion core), upgrades could be applied instead. Garages and Capital Repair Docks include tools.

A basic Tool Kit may be purchased for 350 credits (2 rarity) or rented at a settlement or starport for 50 credits per day.

Capital Repair Dock: Large facilities for capital-sized vehicles are required for silhouettes of 6 or more when making repairs (only). Capital Repair Docks provide two or three additional System Strain or Hull Trauma, depending on their quality. Self repairs in a capital repair dock would be a rare occurrence or very costly.

Capital repair docks may be limited in the silhouette size they may service. For example, a B Grade Starport can service up to silhouette 7 vehicles only (see *Table 4: Starport Repair Resources* above). If no garage is available, a capital repair dock may serve as a garage for silhouette 1-5 vehicles, but does so as if of one less quality. Self repairs of a silhouette 1-5 vehicle in a capital repair dock also receive a ■ due to the incompatibility of equipment.

Some critical repairs on silhouette 6 or higher vehicles may be made without such a repair dock at referee's discretion. For example, repairing the computer system may not require a dock while repairing a massive sublight engine would.

Only paid repairs are normally available from a Capital Repair Dock since such facilities aren't for rent for self repairs. A lucky crew could conceivably gain access to a capital repair dock which they share loyalties with (rebel agents may be able to use a rare Alliance capital repair dock).

Garage: These facilities serve smaller 1 through 5 silhouette vehicles from speeders through freighters. A garage is not required to service such vehicles, but they provide extra benefits above using just basic tools. Garages typically provide one or two additional System Strain or Hull Trauma when paying for repairs, depending on their quality. If performing a self repair in such a garage, they instead provide one or two automatic ☆.

When performing self repairs, a garage can be rented for 50 credits per day. When renting a starport's landing bay (see *Vehicle Ops: Star Journeys*), access to garage facilities is included on-site.

Heavy Lifting Equipment: Heavy lifting equipment can lift up to 4 vehicle silhouette items. Such equipment is important for repairing (only) vehicles of silhouette 5 or more. If such repairs are made without heavy lifting equipment, ■■ is applied. Some critical component repairs may be made without this equipment if sensible. Heavy lifting equipment is included in any Capital Repair Dock. If only Light Lifting Equipment is available (see below), the penalty is reduced to one ■.

Heavy lifting equipment is found at any capital repair dock. If no repair dock is available, heavy lifting equipment may be rented for 50 credits per day.

Light Lifting Equipment: Light lifting equipment can lift up to 2 vehicle silhouette items. Light lifting equipment is important for repairing (only) vehicles of silhouette 3 or 4. Repairs on silhouette 3 or 4 vehicles without this equipment applies ■■. Some critical component repairs may be made without this equipment if sensible. Heavy lifting equipment may also alleviate this penalty when working on silhouette 3 or 4 vehicles.

Light lifting equipment is included in the cost of a garage rental. If only the lifting equipment is desired, it may be rented for 20 credits per day.

Repair Crews: When a crew decides to make repairs themselves, local mechanics can be hired to help for large jobs. The skill of these crews will vary by starport. This extra help can alleviate any time penalties from not having 1 repairer per silhouette of the vehicle (see *Self Repairs* above). They can further help by providing Unskilled or Skilled assistance. Skilled assistance may be applied if at least one helper is able to do so (has a greater characteristic or skill then primary Mechanic, as usual). Unskilled assistance only applies if the total repairers exceed the silhouette of the vehicle.

Unskilled help costs 50 credits per person per day. Skilled help, when available, costs 100 credits per the person's skill level per day. Skilled help is considered to have Intelligence equal to skill level.

Spare Parts: When doing it yourself, spare parts are often required (See *Spare Parts* below). These can easily be purchased in most starports if the crew doesn't wish to scavenge from other equipment or search for it in a settlement.

Self Repair Example: A transport (silhouette 4) needs to repair 4 Hull Trauma and stops by a grade C starport. Per *Table 4's Garage* entry above, the crew could pay for 1 Hull Trauma to be repaired each day for 800 credits each (see *Table 3: Paid Repairs* above). Instead, the crew's mechanic decides to save some credits and possibly time by doing it herself. Each day, garage space is rented for 50 credits. This includes light lifting equipment which is good enough for the silhouette 4 ship. The ship needs 4 repairers (number equal to silhouette) to work on it or there will be a time penalty. The mechanic gets help from 2 other crew members and decides to pay for 2 unskilled laborers found at the staport for another 50 credits each per day. The mechanic of course has a toolkit already so tools won't need to be rented. Spare Parts are needed for each HT to be repaired equal to 100 x Silhouette, or 400 credits each. These are available at the garage. Since the 4 HT is less than half damage, the self repair check is only **Easy (◆) Mechanics**. To this is added a ⬜ due to having extra help (over silhouette) and the Starport C gives an automatic ✳ to the check. Thus, a good roll by the mechanic (3 net ✳ or more) could repair all 4 points of HTT in one day. If this is done, the crew only pays for 50 credits for the garage, 100 credits for help, and 400 credits of spare parts for each point of HT. This would have a total cost of 1,350 credits and only 1 day of work compared to 3,200 credits and 4 days in port. Of course a poor crew mechanic could minimize the savings or even cost the crew more credits and time, if unlucky.

SPARE PARTS

Some repairs require **spare parts**. Others do not. Repair of Hull Trauma, Wear, Components and Gear require parts whether being used from your own stores when doing self repairs or by others for paid repairs. Damage Control and System Strain removal will never require spare parts. Paid repairs include spare parts in their cost, so they don't have to be accounted for.

Spare parts are purchased and used up in a specified amount per successful point or level of repair. They are not used up on a normal failure. Time is wasted in the failed attempt, but the spare parts are normally recovered.

For game purposes, spare parts are generic by type. There is no need to keep track of whether those spare parts are for a sublight drive, hull plating, or a blaster rifle.

Spare parts are commonly available at any starport of grade D or higher. They may also be found in other appropriate places such as a speeder garage or a junk yard. **Spare parts cost 50 credits, have 1 encumbrance, and a rarity of 1.**

For simplicity, spare parts are recorded by their credit value. Thus, a captain who is preparing for the worst might place, "2,000 credits of spare parts", in his ship's cargo hold. Since spare parts have an encumbrance of 1 per 50 credits, those 2,000 credits would take up 40 encumbrance capacity.

Hull Trauma & Wear Parts: Repair of a point of Hull Trauma or Wear requires spare parts in credits equal to 100 x Silhouette of the vehicle.

NEW VEHICLE COMPONENTS
Repluslorlifts: If only means of propulsion, vehicle will crash with severity offset by Pilot check. Difficulty determined by referee based upon altitude and craft design (wings?). If vehicle has thrusters immediately it wills stay aloft but -1 speed and -2 handling. May require Pilot checks for even simple maneuvers depending on streamlining (TIE vs. X-wing).
Inertial Compensators: When change speed or perform Evasive Maneuvers, all aboard suffer 1 Strain unless Brace.
Life Support: See effects of loss in *Vehicle Ops: Consumables & Expenses*.
Power Plant: See effects of loss in *Vehicle Ops: Consumables & Expenses*.

Components & Faults Parts: Components and Faults require credits equal to 200 x Silhouette of the vehicle for each damage level repaired. Faults only have one damage level.

Gear Parts: Gear spare parts are determined by the current level of damage and cost of the gear: Minor – 25%, Moderate – 50%, and Major – 75%.

Spare Parts Examples: A Silhouette 4 vehicle requires 400 credits in spare parts to repair a point of hull trauma or wear. But, 800 credits of parts are needed to remove a level of damage to a component or to remove a Fault.

SCAVENGING

Spare parts may be scavenged, especially from similar equipment. This is not encouraged and should be done only in an emergency. For example, in a pinch a mechanic may scavenge a disabled airspeeder in order to get a landspeeder up and running. Or, a disabled starship with no spare parts in its cargo hold may be forced to scavenge its sensors in order to get damaged comms working. A successfully scavenged source is of course destroyed in the process. Scavenged spare parts are of lower quality then purchased spare parts. **Scavenged spare parts impose a ■ to all checks made with them.** If the target of the scavenged parts is so incompatible that using the parts may be dangerous, the referee may instead upgrade the repair checks.

The difficulty of the scavenged material determines its general quality and amount of parts. For example, scavenging one landspeeder to repair hull trauma on another landspeeder requires only an **Easy (◆) Mechanics** check. But, scavenging an astrogation computer to make repairs to a sublight drive might be **Daunting (◆◆◆◆) Mechanics** due to the computer having few parts the drive might need. When scavenging mechanical or electronic equipment with no set target for the repairs (general salvaging) the referee should require a default **Average (◆◆) Mechanics**, but apply ■■ due to not knowing specifically what should be tossed or kept. Referees should ensure their players don't abuse this by claiming they didn't know what they are going to use the salvage for to receive the Average difficulty, just before repairing something they knew was damaged which would have had a more difficult scavenge difficulty.

If the item being scavenged obviously can't be used to make the repair, the referee should declare it impossible. For example, while parting out a crate of vibroaxes in the cargo hold may provide enough material to patch up some hull trauma, using the same materials to repair a sublight drive would be nonsensical.

Scavenge Amount: The source determines the spare part credit value available. This is based upon the base value of the item and its rarity. **Multiply the value in credits of the item by its Rarity divided by 10.** For example, a rarity 4 item would yield 40% of its value in scavenged parts. Use this method for gear, droids, and entire vehicles. If only a single vehicle component is to be scavenged, consider its rarity equal to that of its vehicle and its base value is 500 credits per silhouette of the vehicle. The referee may lower the base value of the item due to its age or condition. Current hull trauma reduces the base value by 100 credits per silhouette.

Example: An old landspeeder is being scrapped and is estimated to have a value of 3,000 credits. With a rarity of 2, only 20% of its value, 600 credits, could be retained in spare parts.

> ### JUNK MAN
>
> While not a flamboyant career, scavenging can be lucrative for a skilled Mechanic with a knack for finding valuable sources. Since purchasing potential items for salvage would cost more than gain, a salvager must know where to look and what's worth his while. Scavengers often flock to areas where abandoned equipment is plentiful such as old battlefields or abandoned outposts. Another option is to turn to thievery since completely salvaged gear or vehicles are more difficult to identify.

Example: The PCs have stumbled upon a Jawa sandcrawler abandoned in a hidden valley near their Rebel base. Always in need of spare parts for their outpost, they decide to scavenge it instead of attempting to bring it in to be sold intact. The vehicle has a value of 40,000 credits and a rarity of 7. 70% of 40,000 credits is 28,000 credits in salvage value.

Scavenge Results: Scavenging spare parts is performed just as a repair check with all the requirements of tools, self versus paid, requirements such as a repair crew for large silhouette vehicles, time taken, etc. But, you of course do not need spare parts. Instead of repairing, each net success grants 500 credits of salvage up to the maximum value of the source. The source is used up by a like amount. Each net ▼ results in 500 credits of the source being destroyed without any spare parts being salvaged. 🌀🌀 may be used to add 🔲 to the next scavenge attempt from this source or to a repair check using the scavenged spare parts. ⚙⚙ may add ⬛ to the next scavenge attempt from this source or an additional ⬛ to a repair check using the scavenged spare parts. A ⊕ on a success may be used to downgrade the difficulty of the repair using the parts or provide scavenge without reducing the source during this attempt only. A ▽ may cause something catastrophic to occur as the source is taken apart which could cause injury or destruction, at least in part, of the scavenge source. Alternately, the referee may decide a ▽ upgrades any repairs made with the parts.

> **Scavenging Example 1:** A transport's Sensors have been damaged and need repaired. There are no spare parts aboard ship. A poor R4 unit is scavenged for parts and the referee determines this is **Average (◆◆) Mechanics**. The astromech has a potential of 2,475 credits in salvage (value of 8,250 credits with a rarity of 3). Each success gives 500 credits of scavenged quality (⬛) spare parts.

> **Scavenging Example 2:** A silhouette 4 transport is drifting in space with a heavily damaged sublight drive and no spare parts to repair it. The crew starts taking apart the ship's light laser cannon hoping it will provide enough good spare parts to fix whatever ails the sublight drive. Due to incompatibility of parts, the referee determines scavenging of the laser cannon requires **Daunting (◆◆◆◆) Mechanics**. With a base price of 5,000 credits and 5 Rarity, the laser cannon can provide 2,500 credits of parts at most. The high difficulty of the scavenge attempt will probably result in much less than 2,500 credits with 2,400 credits needed (heavily damaged silhouette 4 component) to complete repairs on the hyperdrive. The crew may have to scavenge both of its light laser cannons. Also, repairing the sublight drive with such incompatible parts may be difficult and possibly dangerous so the referee decides to upgrade the difficulty of the salvage instead of just adding a ⬛ to the repair check.

WEAR

Vehicles don't stay in good condition for long unless they are treated well. Harsh and extended use wears on all systems of a vehicle. In game terms, this is tracked by reducing the vehicle's System Strain Threshold until maintenance is performed (repair of worn parts). While accumulating a few points of Wear is usually fine, a large amount of Wear will directly affect operation of the vehicle. Thus it is important to perform maintenance on a vehicle to remove wear to keep it in top shape.

If these house rules are used, it is suggested they be reserved only for major vehicles such as a party's starship.

ACCUMULATING WEAR

Any time a vehicle's System Strain Threshold or Hull Trauma Threshold is exceeded, a point of Wear is given. Additionally, Pilot, Mechanic, and Astrogation checks involving a vehicle or its components resulting in ⚙⚙⚙ or ⛛ may be spent by the referee to cause a point of Wear.

Points of Wear should be recorded on a vehicle's sheet near System Strain Threshold.

EFFECTS OF WEAR

Each time a point of Wear is received two things immediately happen. *First*, reduce the vehicle's System Strain Threshold by 1 point. Depending on the current System Strain for the vehicle, the reduction of the SST could cause a temporary shutdown of the vehicle. If the SST is reduced to 0 by Wear, the vehicle is inoperable until maintenance (repair) is performed to reduce Wear. *Second*, the referee rolls on *Table 5: System Faults* while adding the vehicle's current Wear to the roll. If an Astrogation check resulted in the point of Wear, instead roll on *Table 6: Hyperdrive Faults*. If a fault roll is not applicable to the vehicle, the result should be, "No fault apparent".

AGED

As an option, a referee may use a new quality that represents a vehicle becoming extensively jury-rigged and worn-out after repeated repairs. While making a repair check to remove Wear, a referee may impose a point of Aged on a ⚙⚙⚙ or ⛛. This has no immediate effect. But, once the amount of Aged points exceeds the silhouette of the vehicle, it has become "Aged": ■ to all checks involving the vehicle and its components including repairs. Furthermore, if Aged points increase to over double Silhouette, the ■ is increased to an upgrade in difficulty. These penalties may only be removed with a complete over-haul of the vehicle which replaces nearly everything with new parts and components. This would be a hard decision to make since cost is equal to purchasing the vehicle new and takes one month per silhouette. Buying new and putting the old boat out to pasture may be more sensible.

Wear Example: The *Jolly Smuggler's* captain rolls lots of threat on a piloting roll navigating an asteroid field and the referee assigns 1 Wear to the ship. The System Strain Threshold of the ship is immediately lowered by 1. A roll is also made on the System Faults table while adding 3 to the roll since this is the 3rd point of Wear for the *Jolly Smuggler*. A roll of 62 results in a 65 – A landing gear will not extend all of the way. The referee may reply with, "No fault apparent", which is actually the most common roll, or may report a warning light starts blaring reporting a stuck landing gear. Either way, when the ship later attempts to land, the problem will become apparent as the craft lands lopsidedly, possibly shifting the carried cargo in the ship's hold. This failure will remain until fixed by a Hard Mechanics repair check per the Severity column of *Table 5*.

No Fault Apparent: The most common result of a fault check is, "No fault apparent" reported by the referee. This may occur due to there being no actual new fault, there is a fault but the problem is not yet realized, or the fault was judged as not applicable to the vehicle so it was changed to "No fault apparent" by the referee. The last would occur if the system affected is not present, such as hyperdrive problems for a landspeeder.

When faults are not automatically apparent, they may be revealed through several reasons. First, use of the system affected may reveal the fault. For example, a jammed door would become apparent the next time someone tried to use it. Or, ⚙ or ▽ may be used by a referee to suddenly reveal the result. Second, checks using the system or a related one may reveal the issue (if just the use doesn't reveal it anyway). For example, ✹✹✹ or ✦ while using a vehicle's computer may result in a strange reading that tells the user the inertial compensators are out of whack. Or, while using the gunnery station, ✹✹ or ✦ may be spent for the user to notice rotational bearings are about to freeze up.

If the vehicle's mechanic doesn't want to just wait until the problem becomes apparent, possibly during the worst possible moment, faults may be checked for. This is a time consuming process which is detailed below.

Fault Checking: A crew who suspects problems with their vehicle from a "No fault apparent" result may examine the entire vehicle or look over just a suspected problem area. This represents checking connections, checking over mechanical parts, and running systems diagnostics. The system being checked may not be used during fault checking. Thus, if the entire vehicle is getting a once-over, it needs to be completely shut down or the components left powered up will not be examined.

Checking over all or most of the vehicle requires 1 day per silhouette. Like self repairs, fault checking has a minimum crew of 1 per silhouette, or add 1 day of time per crew missing. If checking over just one system or component, the base time requirement is 1 hour instead of 1 day.

Fault checking uses **Average (◆◆) Mechanics**, but **Average (◆◆) Computer** may be justified for some electrical systems or computer components. Each net success reveals one fault (if any are actually present) in the area(s) checked. Note that this just reveals what the fault it. It isn't repaired by this check.

Table 5: SYSTEM FAULTS		
d100	Severity	Result
01-04	NA	No fault apparent.
05-08	Easy	No fault apparent. An entry hatch or ramp may delay opening or even jam.
09-12	Easy	No fault apparent. Life support scrubbers prematurely wearing out. Treat as double-bunked. If already double-bunked, reduce occupants STT by 1 more.
13-16	Easy	No fault apparent. Air lock has failed and is leaking. The airlock can't be used, or the ship is slowly venting atmosphere. Or, a hatch may fly open suddenly.
17-20	NA	No fault apparent.
21-24	Easy	No fault apparent. Faltering deflectors. When hit, shields work, but overload and shut down. Computer to reset. If no shields, treat as "No fault apparent".
25-28	Easy	Inertial compensators out of whack. When change speed or perform Evasive Maneuvers, all aboard suffer 1 Strain unless Brace.
29-32	Easy	No fault apparent. Electrical brown outs. Referee may use ⚙ for an electrical item (controls, door, lights, component) to turn off for 1-3 turns.
33-36	Easy	No fault apparent. Component (choose one) has become worn or developed a problem receiving Minor damage (one hit, ■ to use), but it does not go offline.
37-40	NA	No fault apparent.
41-44	Average	No fault apparent. Comm antennae needs tuned. Reduce comms range by one band and upgrade all checks using Comms once, even when communicating.
45-48	Average	No fault apparent. Engines running inefficiently, doubling consumables use.
49-52	Average	No fault apparent. Rotational bearings going out. This could be in a turret, cockpit, wings or other large moving part. ⚙ may cause it to freeze in place.
53-56	Average	Sensors have developed "ghosts". Upgrade all sensor checks once.
57-60	Average	A component (choose one) suddenly shuts down. Treat as receiving Moderate damage (two hits, ◆ to use, damage control to repair).
61-64	NA	No fault apparent.
65-68	Hard	Fault may or may not be apparent. Landing gear will not extend or retract fully. Ship sits lopsidedly while landing (cargo may shift), or won't retract after lift-off (-1 Handling). If not appropriate, a wheel, track, or leg may be loose (-1 Handling) or come apart at an inopportune moment with ⚙⚙⚙ or ▽ .
69-72	Hard	No fault apparent. Maneuvering jets, steering, flaps, or some other such device not responding well. Reduce Handling by 1. Repeatable.
73-76	Hard	No fault apparent. Short circuiting throughout vehicle. When the vehicle suffers any amount of strain, it suffers 1 more.
77-80	Hard	Hyperdrive running roughly, increase speed class by 1. Repeatable. If no hyperdrive, treat as "No fault apparent".
81-84	NA	No fault apparent.
85-88	Hard	Engines not at full power. Speed -1. Repeatable.
89-92	Hard	Glitch in navicomp upgrades difficulty of Astrogation checks. Repair uses Computer and parts not required. If no navicomp, treat as "No fault apparent".
93-96	Hard	No fault apparent. Shields need retuning, -1 Defense. Alternatively armor plating may be rusty or loose, -1 Armor. If none, treat as "No fault apparent".
97-100	NA	No fault apparent.
101-104	Hard	Blown capacitors. Can't draw high power repeatedly. May only move (Maneuver used), fire energy weapons, or use shields (get hit) in the same turn. If one happens, the other two can't occur until the next turn.
105+	NA	A component (pick one) blows and is destroyed, causing significant damage to the ship and possibly a hull breach (HT equal to silhouette x3 and immediately roll a Critical).

VEHICLE OPERATIONS
EDGE OF THE EMPIRE

Table 6: HYPERDRIVE FAULTS		
d100	Severity	Result
01-06	NA	No fault apparent.
07-13	Easy	No fault immediately apparent. Hyperdrive running inefficiently. x2 consumables consumption while jumping. May occur a 2nd time for x4.
14-20	Easy	Hyperdrive running roughly, increase speed class by 1. Repeatable.
21-27	NA	Hypermatter igniter takes longer to initiate the reaction. The ship seems to fail to jump, then suddenly does so 1-3 rounds later.
28-34	NA	No fault apparent.
35-41	Easy	A power transfer conduit overloads. Must repair it before can make a jump, but the tripped conduit probably saved damage to another system.
42-48	Easy	No fault immediately apparent. Hypermatter is leaking from the hyperdrive leaving a trail behind the ship. Downgrade any attempts to detect the ship twice. Any attempts to hide the ship have their difficulty upgraded twice.
49-55	Easy	A power regulator blows, sending a surge into the ship's systems causing Minor damage to one of the following: Comms, Transponder, one Weapon, Life Support, Shields, Astrogation Computer, Artificial Gravity, **OR** refer to tables 7-10 or 7-11 on page 245 of EotE Core. The ship still jumps.
56-62	Average	The hyperdrive overloads on arrival at the destination. It is damaged and requires repairs to work again. Treat as Moderate damage to Hyperdrive component. Damage control not possible.
63-69	NA	No fault apparent.
70-76	Average	A power regulator fails, sending a massive surge into the ship's systems causing Moderate damage to one of the following: Comms, one Weapon, Life Support, Shields, Astrogation Computer, Artifical Gravity, **OR** refer to tables 7-10 or 7-11 on page 245 of EotE Core. The ship does not jump.
77-83	Hard	The hyperdrive's coolant system ruptures while in transit, dropping the ship to real space. Treat as Major damage to Hyperdrive component. Damage control not possible.
84-90	NA	The hyperdrive blows and is destroyed. The ship does not jump.
91-97	NA	The hyperdrive blows and is destroyed soon after making the jump, forcing the ship back to real space after an undetermined distance.
98-104	NA	No fault apparent.
105+	NA	The hyperdrive blows and is destroyed, causing significant damage to the ship and possibly a hull breach (HT equal to silhouette x3 and immediately roll a Critical). The ship does not jump or drops back to real space after an undetermined distance.

EQUIPMENT

A list of related or new vehicle gear or attachments from various sources is below. Any house rule changes are noted in *italics*.

GEAR

Gear from other products that may be important to the repairs covered above are summarized below:

Heavy Loader Arm (Special Modifications, p. 51): The loader arm qualifies as Light Lifting Equipment.

Repulsor Clamp (*Special Modifications*, p. 52): This gear can remove one of the ■ from not having Light Lifting Equipment available. It does nothing to alleviate penalties for not having Heavy Lifting Equipment available.

VEHICLE ATTACHMENTS

The new Cargo Crane attachment can alleviate the requirement of Light or Heavy lifting equipment when making vehicle repairs. While the *Retrofitted Hangar Bay* was house ruled primarily due to *Vehicle Ops: Cargo Handling*, it does have benefits for making repairs through use of its modifications.

CARGO CRANE   *new*

This attachment adds a crane of varying size to a vehicle. This could be a small crane attached to a speeder to allow it to pick up small objects or a larger crane for moving massive cargo containers. Only one object may be picked up. The initial attachment grants a smaller crane while a Modification Option expands into larger versions. It is only available on silhouette 3 or larger vehicles. If used in an attempt to tow an object (the craned vehicle moves), it does so at -1 speed and -1 handling. For more easily carrying of objects, see the more expensive Docking Clamps attachment in *Vehicle Ops: Cargo Handling*.

Base Modifiers: Light crane which may move vehicle silhouette 2 or larger objects. Qualifies as Light Lifting Equipment.
Modification Options: 3 Increase Object Size by 1 Silhouette Mods. Object size may not be more than 1 less then vehicle silhouette. If object size increased to 4+, crane qualifies as Heavy Lifting Equipment.
Hard Points Required: 1
**Price/Rarity:** 500 ₮ / 2
Source: New

RETROFITTED HANGAR BAY   *change*

This attachment widens passages, doors, and perhaps removes bulkheads between cargo bays in order to more easily carry vehicles or large containers within the vehicle's encumbrance capacity. Some vehicles already have hangar bays if they carry vehicles by default. This is separate from the vehicle's encumbrance capacity, so these vehicles may still benefit from this attachment if they wish to carry even more vehicles with their cargo bay (encumbrance capacity).

Base Modifiers: *Allows containers and vehicles 2 silhouettes smaller (instead of 3 smaller). Encumbrance capacity of the vehicle or container still must be met from the vehicle's encumbrance capacity.*

Modification Options: *2 Launch Equipment grants ▢ reducing encumbrance capacity by 10% Mods, 3 Repair Equipment grants 1 extra automatic ✷ reducing encumbrance capacity by 10% Mods.*

Hard Points Required: *1*

Price/Rarity: 5,000 x Silhouette ⚡ / 3

Source: *Core Edge p. 271, Core Age p. 286, Core Force p. 270*