
SERVE YOUR LUBRICANTS LIKE
YOU WOULD A PREMIUM BEER
DES-CASE

INTRODUCTION

The consumption and enjoyment of beers from around the world has changed in recent years. It is not about guzzling any old beer any more. Beer drinkers are enjoying more flavorful beers, whether craft beers from local markets or beers brewed around the world that can now be quickly transported to their local store and enjoyed while still fresh.

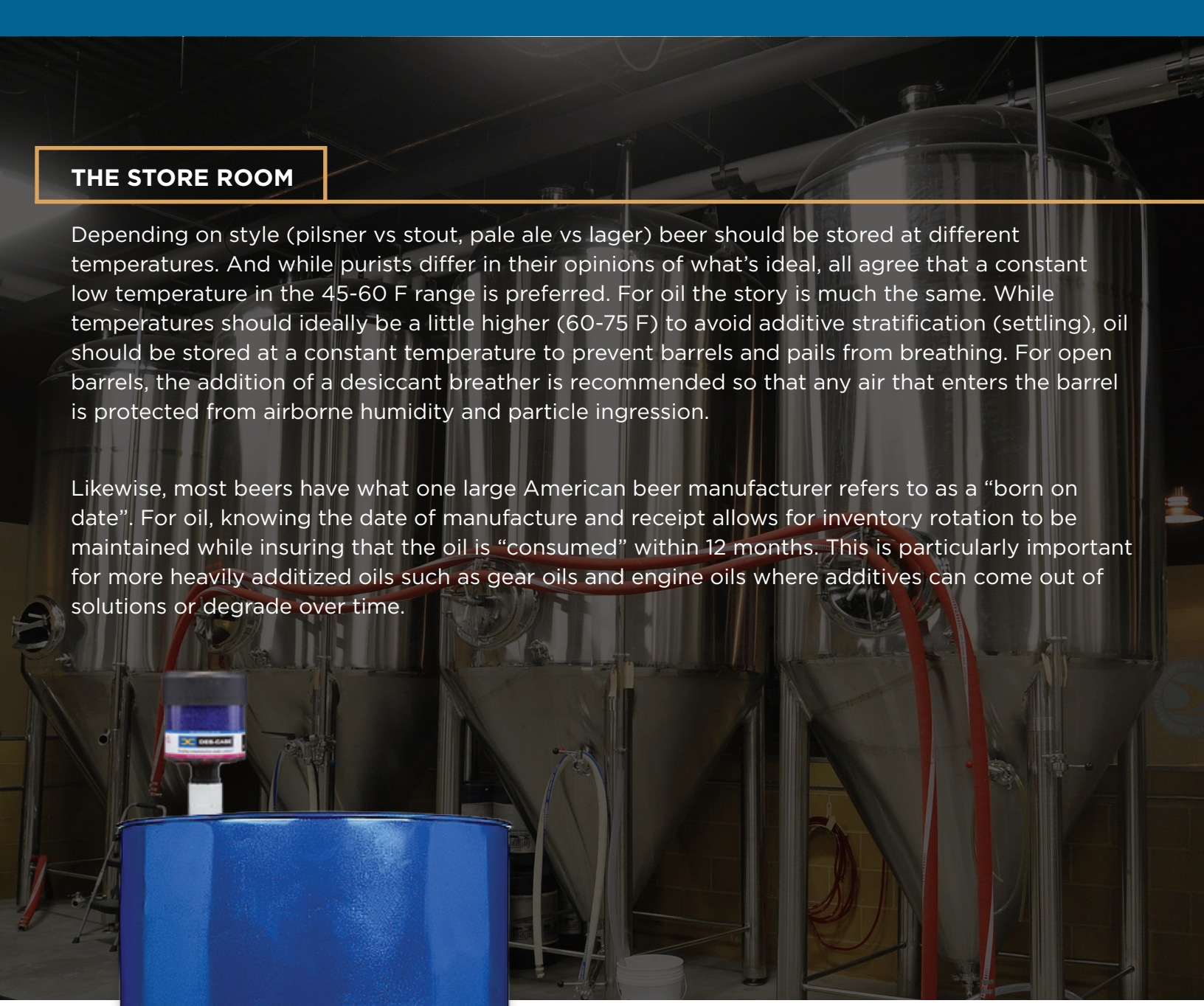
Careful production, packaging, shipment and serving impact the enjoyment of a beer. Small things can affect the satisfaction of your brew. For example, in Belgium every beer comes in a uniquely shaped bottle and is served at the perfect temperature in its own specially designed glass, contoured to enhance the flavor, aroma and overall drinking “experience”. Serving beer is an art form!

Serving beer is a lot like “serving-up” oil to a machine. Just like the condition of the beer and by inference the enjoyment of the consumer can be affected by how it’s served, the condition of a lubricant and how it’s “served” to the machine can also have a profound effect on the “happiness” of the machine. Let’s take that comparison one stage further and compare what it takes to serve a good beer and the key aspects of providing clean, dry oil to a machine.

THE STORE ROOM

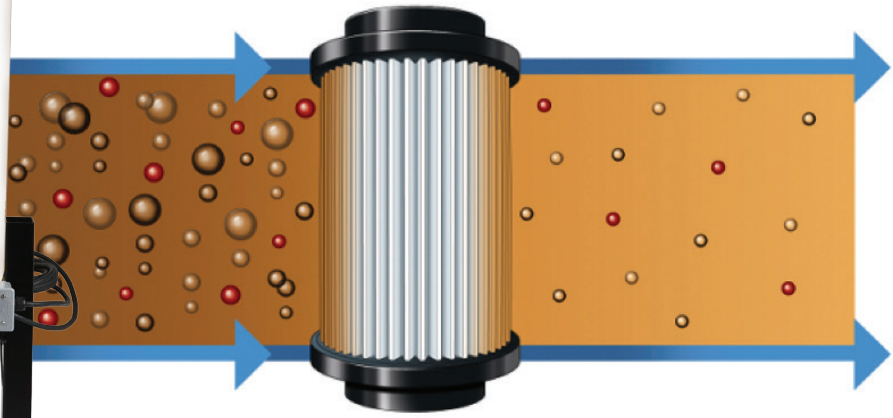
Depending on style (pilsner vs stout, pale ale vs lager) beer should be stored at different temperatures. And while purists differ in their opinions of what's ideal, all agree that a constant low temperature in the 45-60 F range is preferred. For oil the story is much the same. While temperatures should ideally be a little higher (60-75 F) to avoid additive stratification (settling), oil should be stored at a constant temperature to prevent barrels and pails from breathing. For open barrels, the addition of a desiccant breather is recommended so that any air that enters the barrel is protected from airborne humidity and particle ingression.

Likewise, most beers have what one large American beer manufacturer refers to as a "born on date". For oil, knowing the date of manufacture and receipt allows for inventory rotation to be maintained while insuring that the oil is "consumed" within 12 months. This is particularly important for more heavily additized oils such as gear oils and engine oils where additives can come out of solutions or degrade over time.



FILTRATION

With a few exceptions, beer should be filtered prior to bottling. This removes the by-products of secondary fermentation and excess yeast that over time can cause the beer to spoil in the bottle before it's consumed. Oil is much the same. Most new oils are not very clean, containing up to 8-16 times the levels of particle contamination and twice the moisture content recommended for critical applications. For this reason, best practice is to pass the oil through particle and water removing filter elements 5-7 times prior to transferring to critical equipment. Moisture is of particular concern. While solid particles can always be removed prior to use, excessive moisture can cause an oil to "spoil" while still in storage since many additives are polar and thus have an affinity for water.



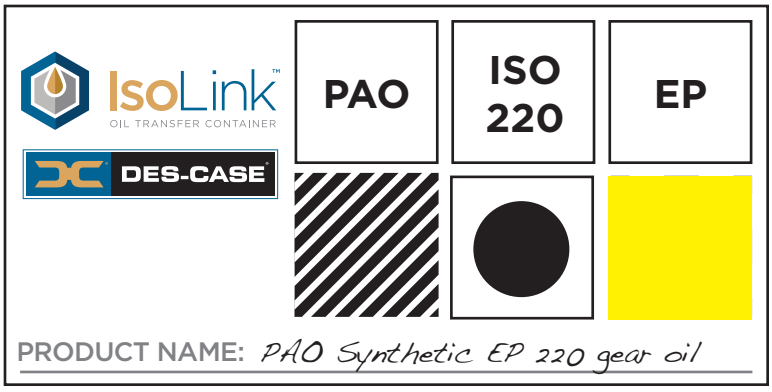
TRANSFER CONTAINER

For large volume oil transfers, it makes sense to take the barrel or tote out into the plant to dispense at point of use. This is no different than filling a keg full of beer for dispensing into the serving glass at the point of “use” where large volumes of beer need to be dispensed efficiently to thirsty patrons. And while some would argue that this is the way that beer should be served, most would have a very different opinion clearly preferring that a premium beer, like a fine wine be served in a glass bottle.

But not any old bottle! The shape, labeling and color of many premium brewed beers are as unique and iconic as the brand themselves. Many brands have a bottle style that becomes synonymous with the beer itself.

Many beer bottles are dark – usually brown or green – and are packaged in lightproof cardboard boxes. This is to prevent the sunlight from affecting the beer before consumption. For oil, bright sunlight can also cause problems. This is due to a photo-catalytic effect which can cause the oil to “darken”. For this reason oil stored in opaque containers should be stored in a cabinet (preferably fireproof) when not in use. Material also makes a difference, which is why beer is packaged in a glass bottle that does not react or affect the flavor of the beer inside. Some plants use metal cans that are galvanized. These should be avoided at all costs because the galvanizing can adversely affect some oils. Instead, durable plastic containers made of a material that does not chemically react with the oil or additive package should be used.

For small volume transfers of oil to machines, these types of containers make a lot of sense. But just like poor filling practices can ruin a good beer, a poorly designed oil transfer container can ruin the oil. In the case of both beer and oil, the culprit is air (oxygen) and in the case of oil, the contaminants (particles and moisture) contained within the air. High performance beer filling machines blast the bottle with clean carbon dioxide twice before filling to displace as much oxygen as possible. For an oil dispensing bottle, this would be impractical. However, there are some simple precautions that do make sense. Take for example the act of filling the oil bottle. Rather than removing the whole lid to pour the oil inside thus introducing contaminants, using quick connects on the bottle lid allows new, pre-filtered oil to be added to the container without opening it to atmosphere.



Labeling is also important. Some beer manufacturers have become creative with their labels – for example, one well known manufacturer has a label that changes color with temperature so you know the right time to consume the beer – they also are a means to showcase effective branding and clearly indicate the beer style and percent of alcohol. Similarly with oil, having a specific label that clearly indicates the type and grade of oil in use can help to avoid the pitfalls of accidental cross contamination of lubricants. Ideally, these labels should be shape and color coded. Just like how you can recognize the label of your favorite beer across the room, oil labels should be clear and concise so there's no mistaking what is contained within the bottle.

THE POUR

While a typical bottle of beer is served in one shot after opening the bottle, beer that is served on draft at a pub from a keg will be continually tapped and dispensed from for several days or weeks. In order to ensure the keg of beer tastes as fresh and flavorful as possible from the first glass to the last, proper steps must be taken. The dispensing system including the beer tubing, tower and faucets must all be kept clean and flushed to avoid excess oxygen and spoilage bacteria. Similarly, oil transfer containers are typically used for many different top-off events. Because of this, an added source of contamination is from the air that enters the container when the oil is dispensed. In most plants, the atmosphere around production equipment is often dirty, dusty and humid. Left unchecked, these contaminants can enter the container when oil is dispensed – particularly if the dispensing nozzle is not tightly closed after each use. Instead, best practice transfer containers include particle and desiccant breathers to filter out harmful contaminants from the air entering the container and a spring loaded trigger to positively seal the container when not in use.

Flow rate is also important. Pouring a beer too fast at the wrong angle will cause an excessively foamy head to appear, ruining both the appeal and taste of the beer. Conversely, too slow a pour and not enough foam will appear causing the beer to lack its characteristic creamy head.

Dispensing oil is similar. While we need sufficient oil flow to dispense the oil in a reasonable length of time, in some circumstances when adding oil through a small fill port or filling a small volume constant level oil, having the ability to throttle the oil flow rate to create the perfect “pour” is also a big advantage.

THE PERFECT SERVE

For the beer connoisseur, nothing can be overlooked. From the temperature of storage to the freshness of the beer; to the bottle the beer is stored in and the glass it is served in; to the angle and speed of the pour everything affects the enjoyment of a premium beer.

Our machines are also expecting and deserving of the same care and attention to receive the perfect serving of oil: Not too much or too little and one that is clean, dry and in good condition.

Cheers!

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