IP LUBRICANTS

IP History

The ITALIAN PETROLI born from the ashes of the Italian Shell which in 1974 decided suddenly to leave the Italian market.
It is purchased by ENI (National Hydrocarbons Agency), which already owned the brand AGIP and, from a commercial point of view, however, lives a life on its own.
In the following years there has been made a restruction (eg. Refinery closures, pooling of Lubs production facilities, and rationalization of road systems etc.) which was available on the market in 1999 is melted nell'AGIP and subsequently in 2002 was sold, which took place in March 2007 and bought by the api Group - old Italian private label founded in 1920.

Currently the Group has become the leading brand bees both in the fuel distribution sector (service stations) and in the wholesale sector (dealers and sales agents).

IP LUBRICANTS NOW

Most IP lubricants are produced in Italy at the API Savona plant
The plant works naturally respecting the ISO 9001 standard, and this is a guarantee of quality of production

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IT - 00144 ROMA (RM) - VIA DELL'INDUSTRIA 92

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UNI EN ISO 9001:2015

IAF 10

Produzione, deposito, transito e spedizione di prodotti lubrificanti per conto proprio e per conto di terzi.

Production, storage and shipping of lubricating products, on one's own and third parties' behalf.

PRIMA EMISSIONE	16/07/1996
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CERTIQUALITY S.r.l. - IL PRESIDENTE

ACCREDIA

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IP LUBRICANTS NOW

- *The current formulations are the same not only for the domestic market but also to foreign countries: that means, therefore, no recipe difference at all.*

- *They lubricant bases are mainly used by the Italian production sites and only for formulation needs, using base oils from leading foreign manufacturers, especially in the use of synthetic components that are now a fundamental part in the new modern oils.*

- *An important concept: it is not our intention to produce lubricants of IP outside the italian borders. We are an Italian company and, of course, our main market is in Italy; but under these considerations, producing where you live means to have control of the quality of your lubricants.*

LUBRICANT PROPERTIES

The role of the lubricant

It keeps the surfaces aparta under all any conditions of loading, temperature and speed

It acts as a cooling fluid by removing the heat ,which is produced from the friction or comes from external sources.

It has to be sufficiently stable to ensure the behavioral consistency and the expected existance

It protects the surfaces from atmospheric attacking agents or aggressive products formed during practicing or use

Some properties are deductible by the physicochemical values; a lot, mainly the most important ones are deductible from tests that try to simulate behavioral exercise.

The friction of the lubricant is the reduction of friction, the removal of heat and the control of the contaminants.

Developing a lubricant that best performs these functions requires a complex balance of the properties of base oils and additives.

The lubricant creates a layer that interferes in the surfaces, replacing the function due to the contact among the materials and its internal friction, which is generally much lower.

The quality of the lubricant has the ability to guarantee the optimum operation of the machine under all controls.

The mainly analysis of lubricants

- Viscosity
- Pour point
- Inflammability
- Demulsivity
- Foaming
- Acidity and basicity
- Evaporation losses
- Ash content
- Corrosion
- Oxidation
- Wear

HOW IS MADE THE LUBRICANT

Oli Base + ADDITIVI

The formulation of lubricants consists of mixture up to homogeneity, a combination of BASE OILS and ADDITIVES, studied and defined so as to ensure in practice an adequate level of performance to the field of use where the lubricant is intended

BASE OILS 1

Base oils are still the dominant component in the vast majority of lubricants.

It is therefore evident that the final oil depends on the decisive manner of their quality.

Along with mineral bases, obtained from the processing of crude oil, the synthetic bases are increasingly important because they are not present as such in crude oil or because they are not obtained for simple physical-chemical treatment of its fractions.

BASE OILS 2

Types of Oils Base Minerals

Paraffinic

Paraffinic hydrocarbons are predominant.
Obtained from most of the flocks available today, they are most widely used.

Naphthenic

Naftene hydrocarbons are predominant.
Available from a few crude oils (Venezuela, USA, Russia), they are used in special cases and only if subjected to solvent or hydrogenation processes.

BASE OILS 3

Classification of Base Oils

The different fractions, or cuts, of base oils produced are classified internationally based on SUS (Sayboldt Universal Seconds) viscosity measured at 40 or 100 ° C (100 or 210 ° F)
The number indicating the SUS viscosity is preceded by a type SN (Solvent Neutral) or HVI (High Viscosity Index) which indicates the production process used. The BS mark is used for the heaviest cutable (Bright Stock)

The number of cuts and their viscosimetric characteristics depend on the manufacturer and the type of process
Normally they are produced:
- a very fluid cut (SN 80 ÷ 100 or spindle)
- a fluid cut (SN 125 ÷ 170 typically 150)
- an average cut (SN 350 ÷ 600)
- a Bright Stock (BS 150 or 200)

BASE OILS 4 *Synthetic Bases*

The most widely used synthetic bases in the lubricant sector are:

- Poly alpha olefins
- esters
- Polyglycol
- Heavy Alkalines
- Hydrocracking base oils

Synthetic bases, compared to mineral base oils
- have a volatility less than the same viscosity (less consumption in exercise)
- higher viscosity index (wider range of use temperatures)
- better temperature stability (longer service life).

some compatibility problem with traditional additives and materials.

Their use is tied
- constraints on performance required by manufacturers (lower viscosity, low volatility, longer life)
- environmental constraints (non-toxicity, biodegradability)
- Marketing needs (synthetic oil = high technology oil).

BASE OILS 5

Rirefined bases oils

What happens once the oil complets its job?

The only way (excluding the burn) is ridistilled for the production of a renewable oil.

Up to now, refining processes have reached an acceptable degree of reliability. Proper supply management and process steps allow to obtain products of high qyality that are identical to those of virgin bases. There are unfortunately still considerable prejudices to the massive use of refined bases, which are wrongly considered to be poor quality products.

ADDITIVES

Improve the intrinsic characteristics of the bases

- Viscosity modifiers
- Sliding point enhancers
- Defoamers / de-emulsifiers

They impart new properties

- Anti-wear / EP
- Detergents
- Dispersants
- Anticorrosives

They extend the life of the lubricant

- Antioxidants.

Engine lubricants

- Motor oils for passenger cars - gasoline and diesel
- Heavy duty diesel engines - essentially diesel
- Two strokes - terrestrial and not
- Stationary motors - diesel, natural gas, LPG
- Transmission oils
- Marine oils
- Specialties

ENGINE OILS- ALL TYPES

Engine oils should meet the follwing requirements

- *They reduce the friction among moving surfaces over a wide range of operational temperature and under varying conditions of loading, reducing drastically the phenomeno of chemical wear among moving parts.*
- *They contribute to remove the heat which is developed by combustion (cool)*
- *They possess high thermal stability and resistance to oxidation , so as to not, throughout the operation period, undergo the phenomena of chemical degradation.*
- *They avoid the formation of foam.*
- *They prevent the formation of deposits in the piston*
- *Cleanse, remove and keep in suspension the carbon residues, the slidge, wchich are formed during the application.*
- *They Possess a low pour point to ensure a smooth and stable starting and fast lubrication at low environmental temperatures.*
- *Have a high viscosity index to ensure maximum protection when hot.*
- *These substances are conferred on the engine olis through the use of high quality base oils and additives that enhance the performance.*

IP Lubrificants – Passengers cars

Prodotto	SAE	Base oil	API	ACEA	MB	VW	BMW	OTHERS
THE BEST-Engine gasoline			*SN*		*229.51*			
IP Sintiax Exclusive C2	*5W30*	*synthetic*	*SN /CF*	*C2*	*229.31/51*	*502.00 505.00*		*GM Dexos 2 PSA B71 2290*
IP Sintiax Exclusive 505	*5W40*	*synthetic*	*SN/CF*	*C3*	*229.51*	*505.01 502.00 505.00*	*LL 04*	*Porsche*
IP Sintiax Super	*5W30*	*synthetic*	*SN / CF*	*A3/B4*	*229.51*		*LL 04*	*GM Dexos 2*
IP Sintiax Exclusive 507	*5W30*	*synthetic*	*SM /CF*	*C3*	*229.51*	*504.00 507.00*	*LL 04*	
IP Sintiax MO Techno	*10W40*	*Semi-syntheti c*	*SN / CF*	*C3*	*229.51*	*500.00 505.00*		
IP Sintiax SX	*10W40*	*Semi-syntheti c*	*SL/ CF*	*A3/B4*	*229.1*	*500.00 505.00*		
IP Multimotor	*15W40*	*Mineral*	*SJ/ CG4*	*A2/B3*	*229.1*	*501.01 505.00*		
IP Multimotor	*20W50*	*Mineral*	*SJ/ CG4*	*A2/B3*	*229.1*	*501.01 505.00*		

IP Lubrificants – Heavy traction

Product	Type	SAE	Base	API	ACEA	MB	MAN	Volvo	Renault	Others
THE BEST- Diesel Engine				*CK-4*		*228.51*				
IP Tarus Turbo LS Sint	*FE*	*5W30*	*synthetic*	*CJ4/SN*	*E4 E6 E9*	*228.31/51*	*M 3677 M 3477 M 3271*	*VDS 3 VDS 4*	*RXD*	*MTU Type 3.1*
IP Tarus Turbo Ultra	*UHPD*	*10W40*	*synthetic*	*CI 4*	*E6 E7 E9*	*228.51*	*M 3477*	*VDS 3*	*RXD*	*MTU Type 3.1*
IP Tarus Turbo Plus	*UHPD*	*10W40*	*Half-synthetic*	*CI 4*	*E4,E7*	*228.5*	*3277*	*VDS 3*	*RXD*	*MTU DDC Type 3, Cummins 20077/8 SCANIA LDF-2*
IP Tarus Turbo Extra	*SHPDO Plus*	*15W40 20W50*	*Mineral*	*CI 4*	*E7*	*228.3*	*M 3275*	*VDS 3*	*RLD-2*	*Cummins 20076/77/78 Mack EO M Plus CAT ECF-1a*
IP Tarus Turbo ONE	*SHPDO*	*15W40*	*Mineral*	*CJ4/SN*	*E9*	*228.31*	*M 3275*	*VDS 4*	*RLD-3*	*Cummins 20081 Mack EO M Plus Cat ECF-3 ECF-2 ECF-1-a*
IP Super Axia Plus	*SHPDO*	*15W40 20W50*	*Mineral*	*CG4/SJ*		*228.1*	*M 271*			*MTU Type 3.1*

Transmissions Oils 1

The oils for automotive transmissions include the gearbox , differential oils and automatic transmission oils (ATF)

The addition of a transmission oil includes:

- an anti-wear / EP / anti-rust / antioxidant package
- a viscosity index improver with very high shear stability (in multigrade)
- a friction modifier
- an antifoam

The specifications currently governing these oils are mainly attributable to the A.P.I. and precisely:

- GL 1 obsolete
- GL 2 obsolete
- GL 3 Severe operating conditions. Changes in yellow alloys. Modest add. EP
- GL 4 Hypoid gears. EP additives and friction modifiers
- GL 5 Hypoid gears. Robust additives EP and friction modifiers

Other specifications:

- MB 235.0 MAN 341
- MB 235.1 MAN 342

Transmissions Oils 2

The oils for automatic transmissions, from the aspect of the additive, are not substantially different from those for transmission with a viscosity much lower than the latter.

The reference specifications refer to larger users of these lubricants:

GM Dexron
Ford Mercon
Mercedes Benz

IP Lubrificants Transmission and gearboxes

Product	SAE	Base	API	GM	FORD	MB
IP Pontiax FZG	*80w90*	*Mineral*	*GL 3*			
IP Pontiax HD	*80w90 e 85w140*	*Mineral*	*GL 5*		*M2C 105A/154A*	
IP Pontiax HDS	*75w90*	*synthetic*	*GL 5*			*235.6*
IP Pontiax HS	*75w80*	*Half-synthetic*	*GL 4*			*235.4*
IP Pontiax LS	*85w90*	*Mineral*	*GL 5*		*M2C 105A/154A*	
IP Transmission Fluid DX		*Mineral*		*Dexron II D*	*Mercon 1987 M2C 138 CJ/M2C 166H*	*236.7*
IP Transmission Fluid III		*Half-synthetic*		*Dexron III (G & H)*	*M/MV*	*236.9*

MOTORBIKES OILS

Motorbikes oils are divided into two categories:

1. Oils for two-stroke engines
2. Oils for four-stroke engines

The lubrication of the two-stroke engine has undergone significant changes in recent years, forcing formulators to use more and more synthetic and semi-based bases. From the performance point of view, the reference specifications are:

API
JASO
ISO

The lubrication of the four-stroke engine does not have particular problems and is very similar to the automotive one. The reference specifications are:

ACEA
API
JASO

IP Lubrificants – MOTORBIKES OILS

Products	SAE	Base	API	ACEA	JASO	ISO
IP Superbike 4	*5w40*	*Synthetic*	*SJ*	*A3*	*MA/MA2*	
IP ExtraRaid 4	*15w50* *10w40*	*Half-synthetic*	*SJ*	*A3*	*MA/MA2*	
IP Moto 4T	*20w50*	*Mineral*	*SJ*	*A3*	*MA/MA2*	
IP Scooter 4	*10w40*	*Half-synthetic*	*SJ*	*A3*	*MA/MA2*	
IP Pro Gpx 2		*Synthetic*			*FC*	*EGD*
IP Scooter 2		*Half-synthetic*	*TC*		*FC*	
IP Mix Plus 2		*Mineral*	*TC*			
IP Blu Super MixMare		*Mineral*	*TC – W3*			

IP Lubrificants – Greases 1

According to the definition provided by ASTM, a lubricating grease is a solid to semi-fluid product consisting of a thickening agent in a liquid lubricant; other ingredients that impart special properties may be present

Greases containing simple soaps as thickeners

Thickeners	Characteristics of grease	Applications
Aluminium	Appearance of homogeneous gel Low drop point Excellent water resistance Tendency to hardening / softening Strong dependence on the shear rate	Low speed bearings Applications in a wet environment Decreased use
Sodium	Appearance coarse, fibrous Moderately high drop point Low tolerance to water Good adhesiveness characteristics	Industrial machinery in general that requires frequent lubrication Roller bearings
Calcium	Homogeneous, from buttery to slightly fibrous Low drop point Good water resistance	Bearings in a wet environment Railroad lubrication
Litium	Homogeneous, from buttery to slightly fibrous High drop point Resistant to hardening / softening Moderate water resistance	Automotive wheels chassis and hubs Grease for the industry in general Machinery for drilling oil wells

IP Lubrificants – Greases 2

Based greases soaps Complex

Thickeners	Characteristics of grease	Applications
Aluminium Complex	Homogeneous, gelatinous appearance Drop point> 210 ° C Good water resistance Resistant to softening Limited duration at high temperature	Typical in steel mills and paper mills Flat and rolling bearings
Calcium Complex	Homogeneous, buttery Drip point> 210 ° C Good water resistance Characteristics intrinsic EP	Industrial and automotive bearings operating at high temperature
Litium Complex	Homogeneous, buttery Drop point> 210 ° C Resistant to softening and leakage Resistance to moderate water	Wheel bearings of motor vehicles High temperature industrial applications

Greases containing thickeners not based on soaps

Thickeners	Characteristics of grease	Applications
Polyurea	Homogeneous, opaque in appearance. Drop point> 210 ° C. Good water resistance Good oxidation resistance Resistance to hardening / softening	Industrial rolling bearings Automobile joints at constant speed
Bentonite clay	Homogeneous, buttery Drop point> 250 ° C Resistant to leakage Good water resistance	High temperature bearings with frequent lubrication Trees and rolling mill bearingsi

IP Lubrificants – Greases 3

Formulative and Application Needs

Service Type	Needs	
High temperature	Thick for high temperatures Base oil with high flame point High NLGI rating	Viscous base oil Oxidation resistance
Low temperature	Low percentage of thickening Fluid base oil Rust resistance	Low NLGI grade Base oil with low pour point
Wide temperature range	Thick for high temperatures Good pumpability Resistance to oxidation	 Low evaporation Resistance to rust
Presence of water	Low washability No variation of consistency	High adhesion Resistance to rust
EP	Excellent tribological behavior EP Characteristics Viscous base oils (preferred)	 Solid additives, if appropriate
Multipurpose	EP medium characteristics Rust resistance Water resistance	Resistance to oxidation Acceptable pumpability

IP Lubrificants – Greases 4

Products range

Soap Type	Name
Litium	IP ATHESIA PGX 00 IP ATHESIA PGX 0-----3 IP GREASE WR IP SPECIAL GREASE PGX SUPER IP BLUSINT IP LITIO FILANTE 2 IP AUTOGREASE LTS
Lithium + Molybdenum disulfide	IP BIMOL GREASE LTM
Litium complex	IP AUTOGREASE CRS 2 - 3
Bentonite clay	IP SILIS AA 1 – IP SILIS AA 2

INDUSTRIAL OIL

In this category of products there are many products that cover all lubrication needs.

Due to the fact that the list of our products is quite long , we will provide the most common ones on tme market ant therefore easy to be sold.

- HYDRAULIC OILS
- OILS FOR INDUSTRIAL GEARS
- OILS FOR AIR COMPRESSORS

HYDRAULIC OIL - REQUIREMENTS

Characteristics of Hydraulic Oils:

The viscosity of the fluid must be chosen based on the operating temperatures of the system, the absorption of power, the speed and the precision of transmission of the hydraulic control

- *High viscosity index*
  To guarantee optimum viscosity both at start-up and during operation
- *Low Pour Point*
  To guarantee the flow of oil even in harsh environmental conditions avoiding cavitation phenomena in the pumps
- *Good Demulsivity*
  For a quick and effective separation of water
- *Anti-foam properties*
  Avoid the presence of stable foams
- *Low air retention*
  Reduces the effect of internal foam that would adversely affect the compressibility of the fluid
- *Chemical stability*
  It extends the useful life of the lubricant and reduces the effects of oxidation, ie the formation of acid products (corrosive), sludge, lacquers and deposits in general
- *Anti-wear properties*
  They prevent the seizure of the pumps (the heart of the system) or the breakage of components in the high load conditions

GEAR OIL - REQUIREMENTS

Characteristics of Gear Oils:

- *Viscosity index, viscosity and appropriate pour point*
  To guarantee the continuity of the oil film in the foreseen operating conditions
- *Chemical stability*
  To maintain the life of the oil for as long as possible, even in the presence of considerable stress
- *Good Demulsivity*
  For a quick and effective separation of water
- *Anti-foam properties*
  Avoid the presence of stable foams
- *Adhesion*
  To resist the centrifugal force in high-load conditions
- *Corrosion protection*
  in the presence of moisture and acid contaminants
- *Anti-wear, anti-friction and EP properties*
  To avoid and guarantee correct operation under foreseeable load conditions and speeds

AIR COMPRESSORS OIL - REQUIREMENTS

Characteristics of oils for air compressors:

- *Viscosity index, viscosity*

To guarantee the continuity of the oil film in the foreseen operating conditions

- *Oxidative stability*
- *To maintain the life of the oil for as long as possible, even in the presence of considerable stress*
- *Good Demulsivity*

For a quick and effective separation of water

- *Anti-foam properties*

Avoid the presence of stable foams

- *Corrosion protection*

in the presence of moisture and acid contaminants

- *Anti-wear properties*

To avoid and guarantee correct operation under foreseeable load conditions and speeds

IP lubricants - HYDRAULIC OILS - GEARS - COMPRESSORS

Product	Viscosity	ISO	Base	DIN	Denison
IP HYDRUS OILS	**32, 46, 68, 100, 150, 220**	*L-HM*	*Mineral*	*51524 T 2 - HLP*	*HF 2*
IP HYDRUS OILS H.I.	**32, 46, 68**	*L-HV*	*Mineral*	*51524 T 3 - HLPV*	*HF 2*
IP HYDRUS OILS SZ	**46, 68**	*L-HM*	*Mineral*	*51524 T 2 - HLP*	*HF 0*
IP MELLANA OILS	**100, 150, 220, 320, 460, 680**	*L-CKD*	*Mineral*	*51517 T 3 - CLP*	
IP TELESIA OILS	**150, 220, 320**		*synthetic*		
IP MELLANA SINT	**150, 220, 320**		*synthetic*		
IP VERETUM OILS	**32, 46**		*Mineral*	*51506 - VD-L*	
IP VERETUM SINT	**68, 100**		*synthetic*	*51506 - VD-L*	

THANKS and GOOD WORK