

# Technical Publication

## Manufacturer's Fluid Specifications

*The fluids noted below are recommended by the steering gear manufacturer. Any fluid noted below a specific gear is acceptable provided different oil types are not mixed. Any mixture or unapproved oil can lead to seal deterioration and leaks. Always completely flush the power steering system when replacing a steering gear ,pump cylinder or hoses. Always refer to OEM specifications.*

**ROSS MANUAL**  
**TRW 503 / 504, GEMMER & CAM & LEVER**  
85 / 140 weight gear oil  
90 weight gear oil



**CAM & LEVER**



**FORD BENDIX**  
Motorcraft - Marcon  
Multi-Purpose ATF XT-2QDX or DDX (ESP-M2C166-H) or equivalent.

**Bendix**



**NOTE: Ross does not recommend the use of synthetic oil**

**ROSS HF54 and HF64**

ATF "E" or "F"  
Ford spec. M2C138CJ  
ATF Dextron 2  
Shell Rotella T .....SAE 30  
Mobile .....SAE 10W30  
Mobile .....SAE 10W40  
Ashland .....SAE 10W40  
Union .....SAE 10W40  
Texaco.....SAE 10W40

**HF54 Series**



**HF64 Series**



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## ROSS HFB52, HFB64 and HFB70

ATF "E" or "F"

Ford spec. M2C138CJ

ATF Dextron 2

Mack EO - K2 Engine oil

Shell Rotella T .....	SAE 30
Mobile.....	SAE 10W30
Mobile.....	SAE 10W40
Ashland.....	SAE 10W40
Union.....	SAE 10W40
Texaco.....	SAE 10W40
Unical Gaurdol.....	SAE 15W40
Unical Gaurdol.....	SAE 30
Essolube.....	SAE 15W40
Chevron.....	SAE 15W40

## HFB52 Series



## HFB64 Series



## HFB70 Series



**NOTE: Ross does not recommend the use of synthetic oil**

## ROSS TAS40, TAS55, TAS65 and TAS85

ATF "E" or "F"

Ford spec. M2C138CJ

ATF Dextron 2

Mack EO - K2 Engine oil

Shell Rotella T .....	SAE 30
Mobile.....	SAE 10W30
Mobile.....	SAE 10W40
Ashland.....	SAE 10W40
Union.....	SAE 10W40
Texaco.....	SAE 10W40
Unical Gaurdol.....	SAE 15W40
Unical Gaurdol.....	SAE 30
Essolube.....	SAE 15W40
Chevron.....	SAE 15W40

## TAS Series



## HPS Series



## ROSS HPS (mechanical section)

90 weight gear oil

85 / 140 weight gear oil

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**SHEPPARD 292, 392, 492, and 592 series**  
15W40 (API SD-SE) motor oil is preferred

**Sheppard  
292 to 592  
Series**



**SHEPPARD M80, M90, M100 and M110\***  
15W40 motor oil  
ATF Dextron 2  
GM Power Steering Fluid  
Hydraulic fluid of Dextron

**Sheppard  
M  
Series**



**\* see Sheppard Recommended Fluid  
Specs on page 6**

## **SAGINAW**

Gas Engines .....Power Steering Fluid only  
Amber or Yellow in color

Diesel Engines..... Power Steering Fluid  
Amber or Yellow in color  
or Dextron

**Saginaw  
Semi-Integral  
Series**



**Saginaw  
Twin Cylinder  
Series**



## **R. H. Sheppard's Oil (Fluid) Specifications for Sheppard Power Steering Gears**

Page 14 of the Sheppard power steering manual on oil specifications states the following:

“The lubricant in the power steering system is the medium by which hydraulic pressures are applied and relieved, under control, to effect steering assist.”

“In addition the lubricant also lubricates moving parts and dissipates heat which reduces efficiency and accelerates wear. It is of the utmost importance to use a lubricant specified and approved by R. H. Sheppard, Co. Inc., in the Sheppard Steering Gear.

“The Sheppard Gear requires the use of 10W-40 (AP SD – SE) motor oil. Highway vehicles should have the oil changed twice a year or every 50,000 miles. Off highway vehicles will require more frequent change intervals.”

“The Series 5 and Series 6 steering gears may be operated with ATF, GM power steering fluid or Dexron. Motor oil is preferred. See Vehicle Manufacturer's Recommendations.”

## **POWER UNION TRCK PARTS. Oil (Fluid) Specifications for Sheppard Power Steering Gears**

Our 20+ years experience as an aftermarket re-manufacturer has led BAB Steering to recommend **only** the use of 10W-40 (for sub zero conditions) or 15W-40 (normal conditions) motor oil in the early style 292 to 592 series of Sheppard Power Steering Gears. We offer the following explanations:

As stated by R. H. Sheppard Co. in #2 above; *“In addition the lubricant also lubricates moving parts and dissipates heat which reduces efficiency and accelerates wear.”* POWER UNION TRCK PARTS having remanufactured thousands of Sheppard Steering Gears has determined that motor oil (which is the lubricant preferred by the R. H. Sheppard Co.) extends both the efficiency and the life of the early style Sheppard Steering Gear. This fact is substantiated by the wear that is evident to the spool valve and worm screw areas on steering gears using Dexron, ATF or power steering fluid when compared to gears using the preferred motor oil.

Most technicians or parts people for that matter do not know how to identify or find the

part number on a steering gear. So asking them to distinguish the series of a steering gear as an option to use Dexron, ATF or power steering fluid only compounds the problem. **NOTE:** The series of a gear is identified by the last number in the part number. For example a 492SEE**5** is a Series 5 Sheppard Steering Gear and a 492CDZ**4** is a Series 4 Sheppard Steering Gear. Both of these are Transit gears. The problem is the 492CDZ**4** must use motor oil and so should the 492SEE**5** because it is the preferred lubricant but you could use Dexron, ATF or power steering fluid in the 492SEE**5**. Keeping it simple reduces the risk of using the incorrect lubricant.

In technical terms, the early style Sheppard steering gear has a floating piston. The viscosity of the lubricant helps to center the piston in its housing and also seals one side from the other. Dexron, ATF and power steering fluid doesn't have the correct viscosity and tends to lose its viscosity after a period of time due to heat. The Series 5 and Series 6 Sheppard Steering Gears have plastic o-rings on the piston which help seal and center the piston. We can only assume this is the reason why Sheppard states in number 5 above that both these series of gears **may be** operated with ATF, GM power steering fluid or Dexron. However, Sheppard also states that: **Motor oil is preferred.**

***POWER UNION TRCK PARTS would like to point out that the wear that is evident to the spool valve and worm screw areas on the Series 4 steering gears is also evident on the Series 5 and Series 6 steering gears when using Dexron, ATF or power steering fluid compared to gears using the preferred motor oil.***

POWER UNION TRCK PARTS believes that the manufacturer of the steering gear should dictate the correct lubricant for each of their gears. Allowing the Vehicle Manufacturer to make recommendations only confuses the issue. The Vehicle Manufacturer is not the manufacturer of the steering gear. However, we also believe that, keeping it simple reduces the risk of using the incorrect lubricant, which will reduce the life of the gear.

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R.H. SHEPPARD COMPANY, INC.  
101 Philadelphia Street, P.O. Box 877 \*  
Hanover, PA 17331-0877 tel: 717.637.3751

**R. H. SHEPPARD COMPANY APPROVED FLUIDS FOR POWER STEERING**

Automatic Transmission Fluid Dexron III  
Automatic Transmission Fluid Type "E" or "F"

**\*Castrol Enduron S 15W40 Synthetic**

Castrol MP Dexron III / Mercon  
Castrol Tecton S 15W40  
Castrol Tecton Extra 15W40  
Castrol TransSynd

Chevron Delo 400 Multigrade 15W40  
Chevron Automatic Transmission Fluid Dexron III  
/ Mercon  
Chevron Rykon Premium MV 5W20  
Chevron RPM Heavy Duty Motor Oils 15W40  
**\*Chevron Synthetic Automatic Heavy Duty  
Transmission Fluid**  
Chevron 10W40 Supreme

Cummins Premium Blue 2000 15W40

ELF Lubricants XT2388 / Dexron III

Exxon Auto H32 Hydraulic Fluid  
Exxon Firexx HF-DU68

Fleetrite PSF (CH990625)

Ford Spec. M2C138CJ

Mack EON Premium Plus

**\*Mobil 1 0W30 Tri-Synthetic**

Mobil 1 15W50 Motor Oil  
Mobil ATF 210  
Mobil Delvac 1300 Super 15W40  
Mobil Quintolubric 822-220  
Mobil Super 10W40 Motor Oil  
Mobil Super 15W40 Motor Oil

Shell Global Code 51204 PSF 20631  
Shell Rimula Premium 15W40

Shell Rotella T30W  
Shell Rotella T SAE 30  
Shell Rotella T 15W40  
Shell Tellus T46 Oil

Texaco Havoline 10W40  
Texaco Havoline Automatic Transmission  
Fluid Mercon / Dexron III

Texaco Texamatic 7045E Automatic  
Transmission Fluid

Texaco URSA Premium TDX 15W40  
Texaco URSA Super Plus 15W40

Union 10W40  
Union 15W40  
Unocal 46 Power Steering Fluids  
Unocal Guardol 15W40 Motor Oil

US Oil Wide Range Automatic  
Transmission Fluid

Valvoline All-Climate 10W40 Motor Oil  
Valvoline All Fleet Plus 15W40  
Valvoline AW 32 HVI Oil  
Valvoline Premium Blue 15W40

**\*Valvoline Synthetic Premium Blue 5W40**