



DRIVETRAIN TROUBLESHOOTING CHECKLIST

1 ABNORMAL WEAR/DEBRIS CHECKS

- Check magnetic drain plug for particles and examine.
- Check magnetic screens.
- Drain oil through a fine cloth or sieve.
- Drain oil and flush if necessary to clear system.
- Check operation of system (e.g. noise, vibration, oil pressure etc.)
- Thief sample drawn from bottom of the sump.
- Not sampled hot and midstream at drain (see sampling instructions).
- Check correct oil level is being maintained.
- Check correct oil grade is being used.
- Lack of/excessive particles can result from cold sampling procedure as oil is not well mixed.
- Debris could come from a previous failure or an accumulation of wear particles.
- Check shaft alignment.
- Check diff lock operation.
- Oil pump not operating.
- Extended lubricant use.
- Check for misalignment of drive train.
- Check tyre diameters are the same size.

2 DIRT AND WATER CHECKS

- Check for leaking oil seals.
- Check for damaged or missing breathers.
- Loose cover plates or linkage boots/seals damaged.
- Oil storage or top-up containers/funnels dirty.
- Dirt entering when unit filled or topped up with oil.
- Pressure cleaning procedure introducing water or dirt.
- Condensation due to low operating temp. or blocked breather.
- Oil cooler leaks.
- Check sampling technique.
- Recent overhaul/rebuild.

3 OVERHEATING CHECKS

- Sump overfull.
- Heat transfer (e.g. binding brakes).
- Low oil level.
- Unit caked with dirt.
- Oil cooler blocked or restricted.
- Incorrect oil grade.
- Overload conditions.
- Shaft misalignment.
- Localised high temperature due to wear problem.
- Diff lock left engaged for extended periods.

CLEAN OIL SYSTEM TROUBLESHOOTING CHECKLIST

1 ABNORMAL WEAR/DEBRIS CHECKS

- Check oil filter for particles and examine.
- Drain oil through a fine cloth or sieve.
- Sample taken from filter bowl (incorrect sampling method).
- Drain oil and flush if necessary to clear system.
- Check operation of system (e.g. noise, vibration, oil pressure etc.)
- Debris could come from a previous failure or an accumulation of wear particles through extended lubricant use.
- Not sampled hot and midstream at drain (see sampling instructions).
- Lack of/excessive particles can result from cold sampling procedure as oil is not well mixed.
- Check magnetic screens.
- Oil pump not operating.
- Thief sample drawn from bottom of the sump (incorrect sampling).
- Carry out stall test and check for knocking at stall speed (transmission).

2 OVERHEATING CHECKS

- Incorrect oil grade.
- Sump overfull.
- Low oil level.
- Unit caked with dirt.
- Oil cooler blocked or restricted.
- Localised high temperature due to wear problem.
- Overload conditions.

3 DIRT AND WATER CHECKS

- Check sampling technique.
- Check for leaking oil seals.
- Loose cover plates or linkage boots/seals damaged.
- Dirt entering when unit filled or topped up.
- Recent overhaul/rebuild.
- Oil storage or top-up containers/funnels dirty.
- Oil cooler leaks.
- Pressure cleaning procedure introducing water and dirt.
- Condensation due to low operating temperature or blocked breather.
- Water traps not functioning or breather blocked (compressor).
- Check for damaged or missing breathers.
- Check oil filter for by-pass operation.